– MIDDLE EAST @ WAR 26 –

AIR POWER AND THE ARAB WORLD

1909–1955

VOLUME 2:
ARAB SIDE SHOWS, 1914-1918

Dr David Nicolle &
Air Vice Marshal Gabr Ali Gabr

MIDDLE EAST @ WAR
SERIES

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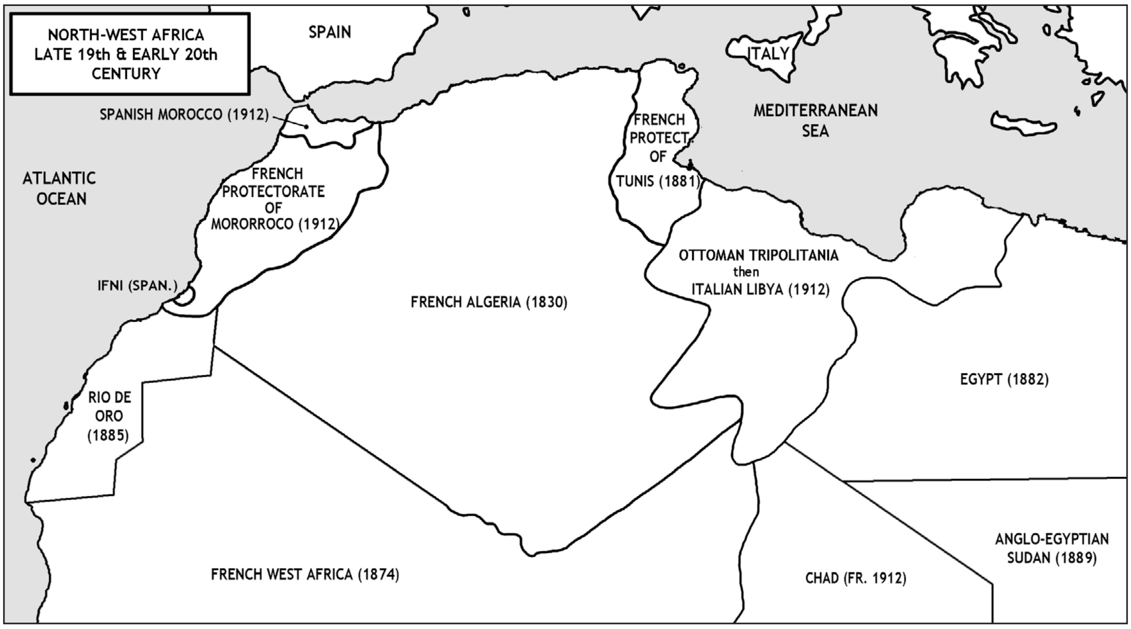

NORTH-WEST AFRICA
LATE 19th & EARLY 20th
CENTURY
SPAIN
ITALY
MEDITERRANEAN
SEA
SPANISH MOROCCO (1912)
FRENCH
PROTECT.
OF
TUNIS (1881)
ATLANTIC
OCEAN
FRENCH
PROTECTORATE
OF
MORORROCO (1912)
OTTOMAN TRIPOLITANIA
then
ITALIAN LIBYA (1912)
IFNI (SPAN.)
FRENCH ALGERIA (1830)
EGYPT (1882)
RIO DE
ORO
(1885)
ANGLO-EGYPTIAN
SUDAN (1889)
FRENCH WEST AFRICA (1874)
CHAD (FR. 1912)

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Cover: A Short Type 827, number 822; one of three operated by the British RNAS in Mesopotamia, here shown in its original form with floats. While the nationality of number 822 was identified by a Union Flag [incorrectly called a Union Jack] on its tailfin, numbers 825 and 827 had the flag on their fuselages. When these seaplanes arrived in September 1915, they had been intended to operate from the river Tigris, but this was dangerously shallow in high summer so the Short seaplanes were converted into landplanes by replacing their main floats with wheels on what were still large and cumbersome undercarriages, while the tail-floats were replaced by sprung tailskids.(Artwork by Tom Cooper)

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DEDICATION

For Air Commodore Abd al-Moneim Miqaati (8 July 1904–5 April 1982)
in memory of a meeting in Groppi's in 1970

"We do not fear being called meticulous, inclining as we do to the view that only the exhaustive can be truly interesting" (Thomas Mann, "Foreword" to *The Magic Mountain 1924*; trans. H.T. Lowe-Porter 1999)

1

BRITISH AIR OPERATIONS IN THE ARAB WORLD

The story of the British Royal Flying Corps (RFC), Royal Naval Air Service (RNAS) and their successor the Royal Air Force (RAF) in the Middle East during the First World War has been widely told. So, just as the final chapter of Volume 1 concentrated on the activities of Ottoman air units as they impacted upon Arab forces who were fighting against the Ottoman Empire, this chapter will focus upon the role of those British flying units which operated in support of Arab forces fighting alongside the Allies or against those opposing them.

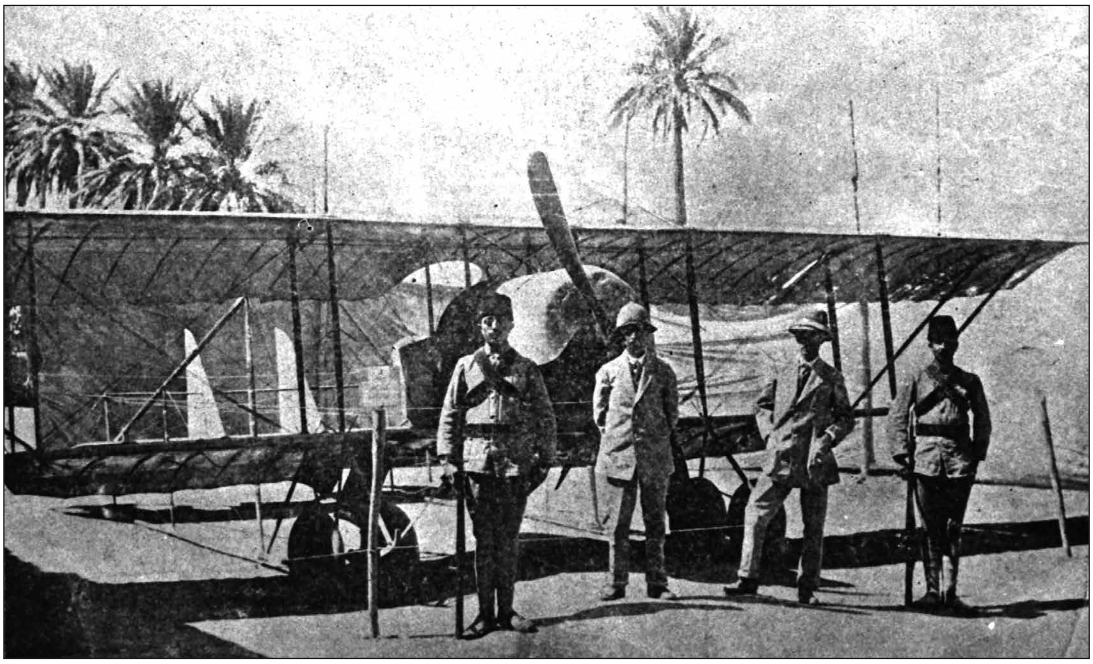
Following Allied defeat in the Gallipoli campaign, Ottoman military prestige soared throughout the Middle East while that of their local Arab supporters increased. Dreams of extending Ottoman influence and maybe even domination eastwards revived, along with German strategic interest in the possibility of undermining British domination in southern Asia. More immediately, there was renewed focus on the Suez Canal. There was even the distant and unrealistic prospect of somehow pushing down the African continent to support German colonial forces which, under the determined and masterly leadership of Paul von Lettow-Vorbeck, were still fighting in Tanganika, what is now Tanzania.

In contrast the British wanted to restore their prestige after the Gallipoli disaster, which they did with a confused mixture of arrogant oppression and initially feeble attempts to portray Britain as the friend of the Arabs. Air power and aeroplanes would play their part in these efforts. On one hand, naval aviation was used to project British power in a dramatic and often very visible manner. On the other hand, the new medium of propaganda photographs showed kindly Royal Flying Corps officers explaining their flying machines to suitably impressed local Arab people. In these pictures the locals ranged from important local leaders who were allowed into the cockpits of some aircraft, to groups of open-mouthed children and more reserved elderly men. Strangely there tended to be a lack of local men of military age in such pictures.

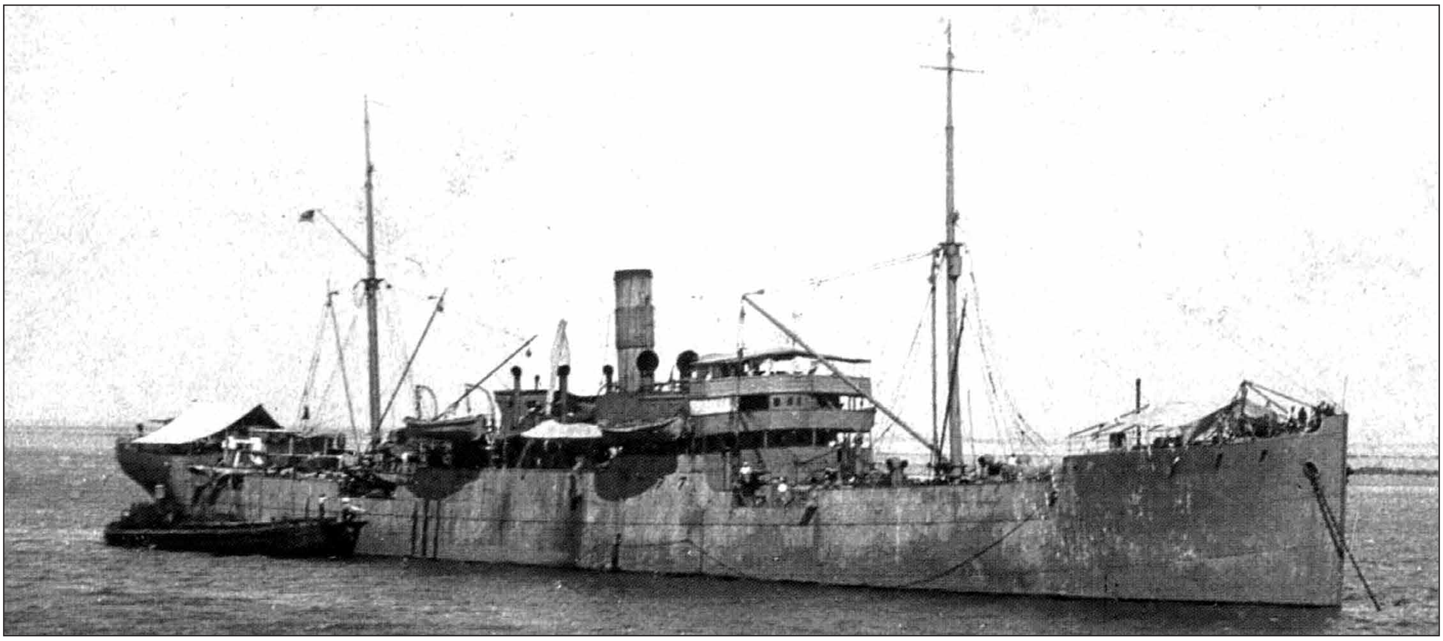
Other photographs illustrated British aircrew purchasing fresh food, vegetables and meat from local merchants. Whether this was to highlight fraternisation with the "natives" or reflected a breakdown in British logistics is less clear. Meanwhile local craftsmen and unskilled labour initially played only a very minor role in support of the RFC across the Middle East. Their importance would increase later, though generally in support units far from the active fronts, such as depots, aircraft parks, some maintenance facilities and, to a lesser extent, training establishments. The most important of these were in Egypt, especially after the threat to that country and its Suez Canal had been lifted.

Another little-known way in which the Arab world – or, more particularly: holders of British citizenship resident in the Arab world – contributed to the Allied war in the air was by donating money to purchase what became "presentation aeroplanes". These machines were an interesting aspect not only of the war in the air but also of the way in which peoples' enthusiasm was used to boost both morale and British prestige. Each aeroplane had the name or location of its sponsor written very visibly on the fuselage or, in the case of pusher types, on the nacelle. Those from the Arab countries consisted of the following:

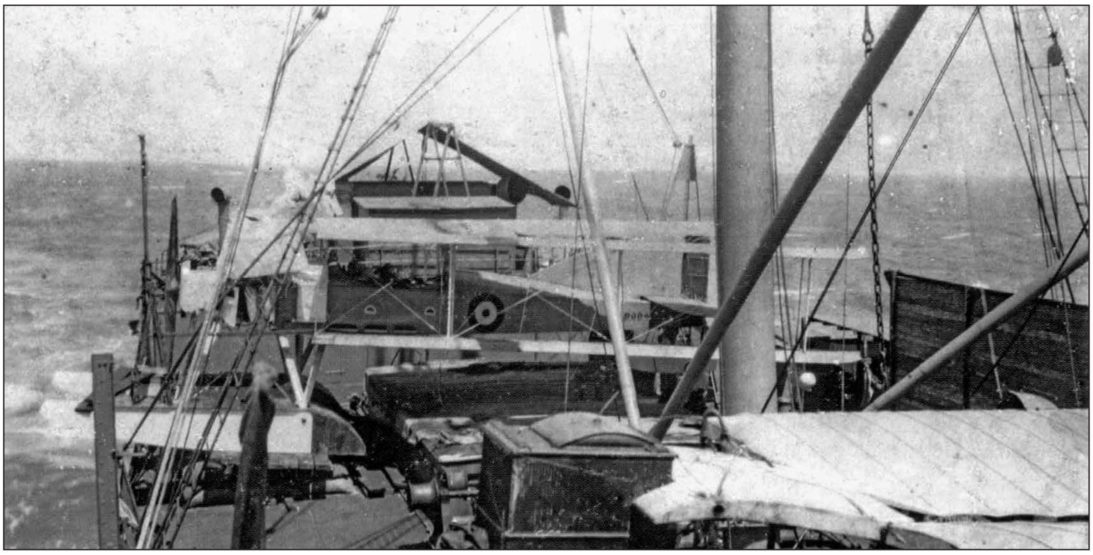
- FE2b (serial number 7710), "Presentation by the Residents of Aden", which was struck off charge on 30 November 1916.



This Caudron G.3, serial number IFC 3 of the Indian Flying Corps was part of the British Royal Flying Corps. It was brought down and captured by Ottoman forces in what is now southern Iraq on 16 September 1915 [see Volume One]. (From the wartime Ottoman newsmagazine Harbi Majmu'asiya, Askeri Muzesi Istanbul)



HMS *Anne Rickmers*, or HMS *Anne* as she was generally known, had previously been a German merchant ship of the same name. Seized in Egypt at the start of the First World War, she was one of two vessels converted into seaplane tenders at Port Said. (Puke Ariki Collection)



Two Short Type 184 seaplanes (serial numbers 8004 & 8054) aboard HMS *Anne* in the eastern Mediterranean, probably during 1915. (Puke Ariki Collection)

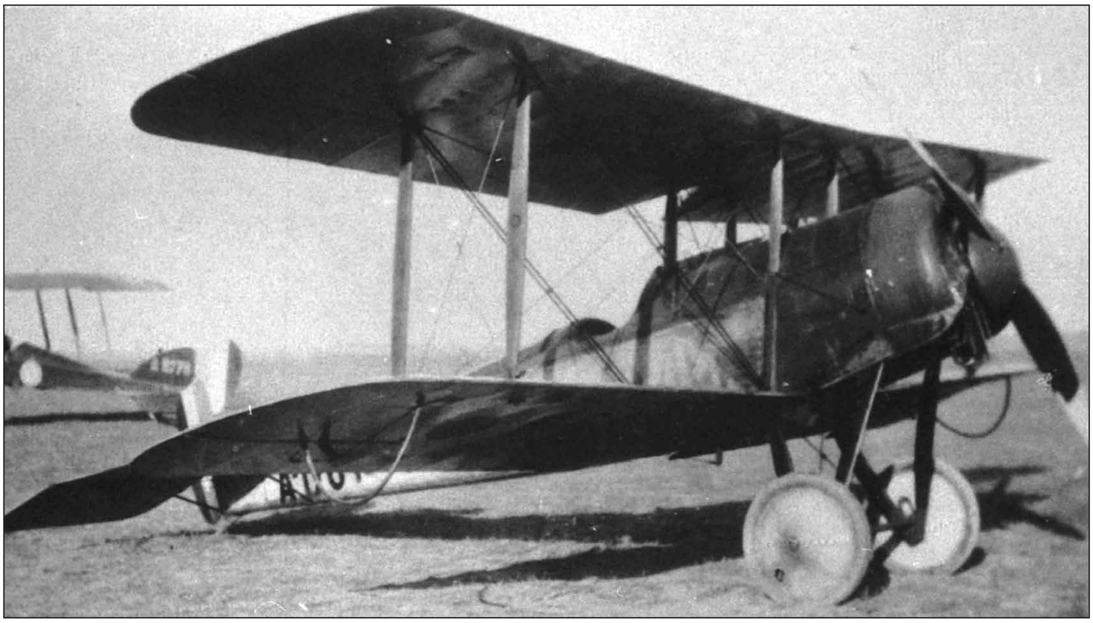
The name was then given to an RE8 (serial number A3761) which went to No. 5 Squadron, its crew being killed in action on 9 November 1917. The name next went to another RE8 (serial number C5065) operated first by No. 7 Squadron in May 1918 and then by No. 15 Squadron before being struck off charge in September that year. The name was next supposed to go to a DH4 (serial number unknown) in January 1919 though this apparently never happened.

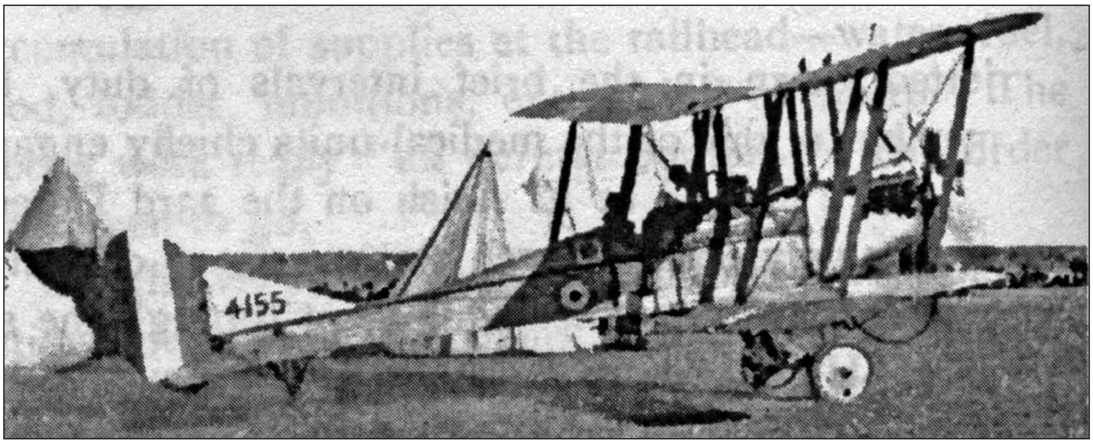
- Sopwith 1½ Strutter (serial number 9405) was the first to be named "Britons in Egypt No.1 'Alexandria'" and was to be allocated to 5 Wing RNAS at Dunkirk, but no further information is available.
- Sopwith 1½ Strutter (serial number 9739) was named "Britons in Egypt No.2", this machine being flown by 3 Wing RNAS.
- BE2e (serial number A3071) was named "Alexandria (Egypt) Britons No.1", being operated by 31 Squadron on the North-West Frontier of India. It was still on RAF charge in January 1919.

In November 1915 the headquarters of the RFC's 5th Wing (Nos. 14 and 17 Squadrons) and the personnel for a Middle East aircraft depot was established in Egypt. This became known as X Aircraft Park, and was initially based on the edge of Cairo at Abbasiya, under Captain C.H. Rowe. However, the growing importance of the RFC in support of the British Egyptian Expeditionary Force in Palestine soon caused X Aircraft Park to be expanded as X Aircraft Depot. This was made responsible for the issue of technical equipment and stores to all RFC units across the Middle East.

The RFC's establishments in Egypt soon also included training establishments which, like operational British squadrons elsewhere in the Middle East, were not organised in quite the same way as comparable units in Western Europe. A reliable training establishment for the steadily expanding RFC was clearly needed by 1916. In fact, the predicable weather and generally clear skies of Egypt made it an ideal place to learn to fly, and for the British it would remain so for many decades. So, in April 1916, the British War office decided to organize a pilot training establishment in Egypt; personnel being sent from England in July and August to set it up. The result was several reserve squadrons, the first of which was No. 21. Reserve Squadron at the RFC camp at Abbasiya on the north-eastern edge of Cairo. It came into official being on 12 July, followed by Nos. 22 and 23 Training Squadrons at Abu Qir, east of Alexandria, on 24 August.

In August 1916 a first, small-scale technical training class was also held in the ante-room of an officers' mess. In November, this was upgraded as No. 3 School of Military Aeronautics. Two months earlier the three Reserve (or training) Squadrons in Egypt had similarly been grouped in the RFC's Base Depot at Abu Qir to form the 20th Reserve Wing (No. 21 Reserve Squadron and No. 22 Training Squadron). This was the start of the RFC's, and then the RAF's, long association with Abu Qir which was placed under the command of Lieutenant-Colonel A.G. Board. He had arrived from England on 15 September 1916 and would later play an important, if brief, role in the creation of the Egyptian Air Force.


A Bristol Scout D, perhaps serial number A178?, with a BE2 in the background. It is said to have been photographed in Sinai or Palestine, and both aeroplanes may have formed part of No. 1 Squadron, Royal Australian Air Force. (Cross & Cockade International Archive)



BE2c, serial number 4155, was used to evacuate a wounded British officer from Maghdaba in August 1916, following the British capture of al-Arish. (Cross & Cockade International Archive)

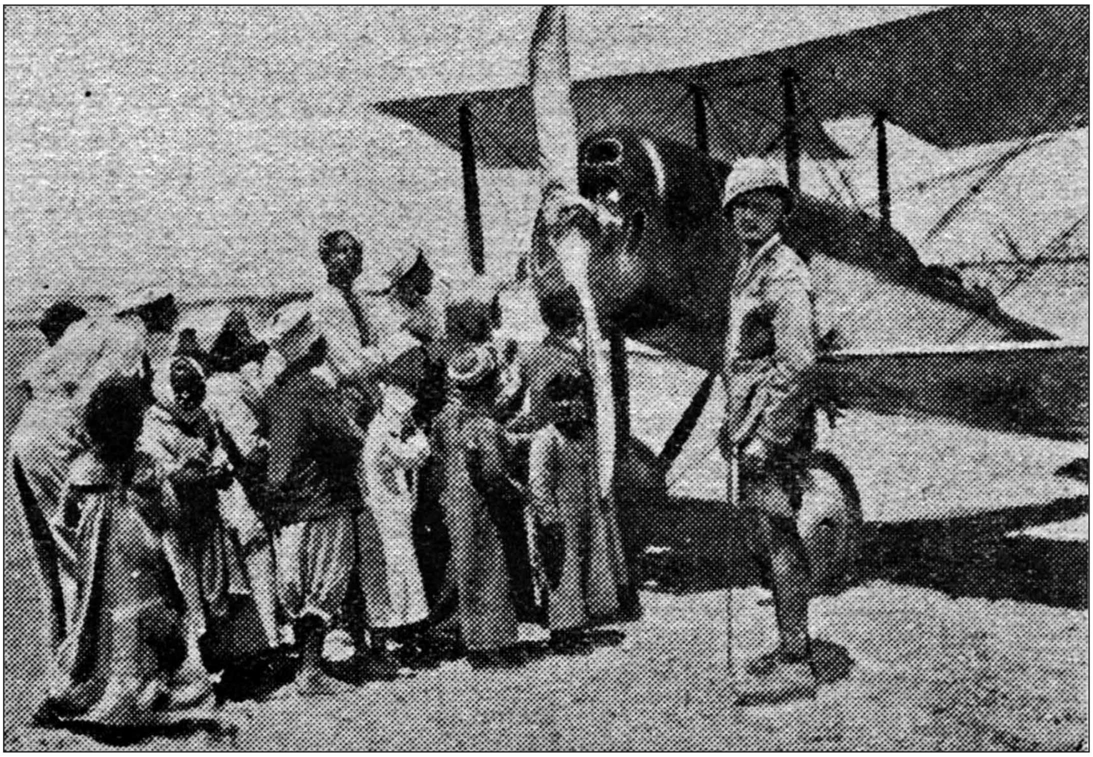
In December 1916 a fourth squadron, No. 57 Reserve, was formed at Ismailia from flights which had been trained by the 5th Wing. It was needed because of a slowing down of training in England, caused by "unsuitable weather on winter days". The British War Office clearly appreciated the advantages of having such an organisation located in Egypt where winter conditions were normally considered perfect for flying. Learning to fly in Egypt was not without problems and hazards, of course. One of the many aspiring aviators who found themselves there was F.A. Bates, who kept a diary of his experiences learning to fly in an archaic Maurice Farman Shorthorn in No. 21 Reserve Squadron at Heliopolis. Bates was then sent to No. 22 Reserve Squadron at Abu Qir to continue training on more advanced machines before himself serving as an instructor with No. 23 Reserve Squadron at that same aerodrome.

Bates' diary entry for 19 March 1917 described flying to Heliopolis aerodrome; "our goal, can be seen straight ahead on the desert edge on the East side of the cultivation, a great wedge of colour set in the sand". After landing at Heliopolis, he flew on to Ismailia in a BE2c, taking off shortly after 1600 hours and rising to 1,000 ft.. He and his instructor then flew along the edge of the cultivation: "The wind is now dead against us and pretty strong. Consequently, we are making only about 40 mph ground speed or less, though our air speed is 65 to 70. At 4.45 (1645 hrs) we reach Bilbeis (Bilbays), a large (cavalry) remount depot, and at five o'clock (1700 hrs) we pass El Kebir (Tal al-Kabir). Ismailia and the lakes on the canal can now be made out in the distance".

It was at this point that Bates started having problems;

> At 5.10 (1710 hrs), a change in the sound of the engine is noticeable and anxiously I listen but, although the revs fall to 1475 from 1500 there is nothing to worry about until five minutes later the engine develops a very bad miss and a nasty metallic noise. Revs fall to 1300, not sufficient to keep the machine up. She is now about 3200 ft. up, so there is plenty of time to look out for landing grounds. A stretch of desert near a station on the railway looks a possible landing ground – but away in the distance is Ismailia tempting the pilot to carry on and chance it. A stretch of some 10 miles of cultivation has to be crossed, full of palm groves and looking like impossible landing ground. The poor engine thumps and knocks on its seven cylinders instead of eight: I balance the risk with the inconvenience of landing out in the country, and possibly crashing the machine, and I decide to try and carry on. The machine's speed falls to 50 and she loses height gradually. The engine keeps going in a sort of way and, within gliding distance, she is still 2200 ft. up. With a feeling of great relief, the throttle is closed and the engine's troubles cease. We spiral down and land at 5.33 (1533 hrs). Mechanics come out to meet us as the wind is strong (threatening to tip the aeroplane over). The engine trouble was a cracked cylinder.

From July 1917, the X Aircraft Depot at Abbasiya was also being used for the training and testing of personnel who had been transferred to Egypt, and 1918 would also see the establishment of the Native Base Depot specifically for training local craftsmen.



A Bristol Scout with a "flat front" engine cowl having a small central opening plus additional holes to improve the cooling of the rotary engine. Photographed with a number of Arab children relatively early in the war, reportedly in Palestine. (from *The War Illustrated* magazine on 4th May 1918)

During the course of the First World War the organisational structure of the RFC and subsequently the RAF naturally evolved. This was largely because the numbers of men, aeroplanes and units increased hugely. In July 1916, for example, the RFC Middle East Brigade was formed under Brigadier General W.G.H. Salmond. Within Egypt this was still a small operation consisting of an HQ at Ismailia with one Flight of No. 14 Squadron attached. Another Flight of No. 14 Squadron was based at al-Qantara next to the Suez Canal while a smaller detachment from the same squadron was based at Port Said. One Flight of No. 67 Squadron was at a new aerodrome outside Suez which had initially been opened by C Flight of No. 17 Squadron in February 1916. Heliopolis was meanwhile home to No. 67 Squadron, along with a half-Flight of No. 14 Squadron Finally, at Sollum, close to the Libyan frontier, there was another half-Flight of No. 14 Squadron, while at Kharga oasis there was one Flight from No. 67 Squadron. However, Brigadier General Salmond's Middle East Brigade also incorporated RFC units in Macedonia, Mesopotamia, Palestine and East Africa under one unified command. Meanwhile those units actually based in the Middle East had to make do with older, often obsolete equipment for years before being given more modern aircraft.

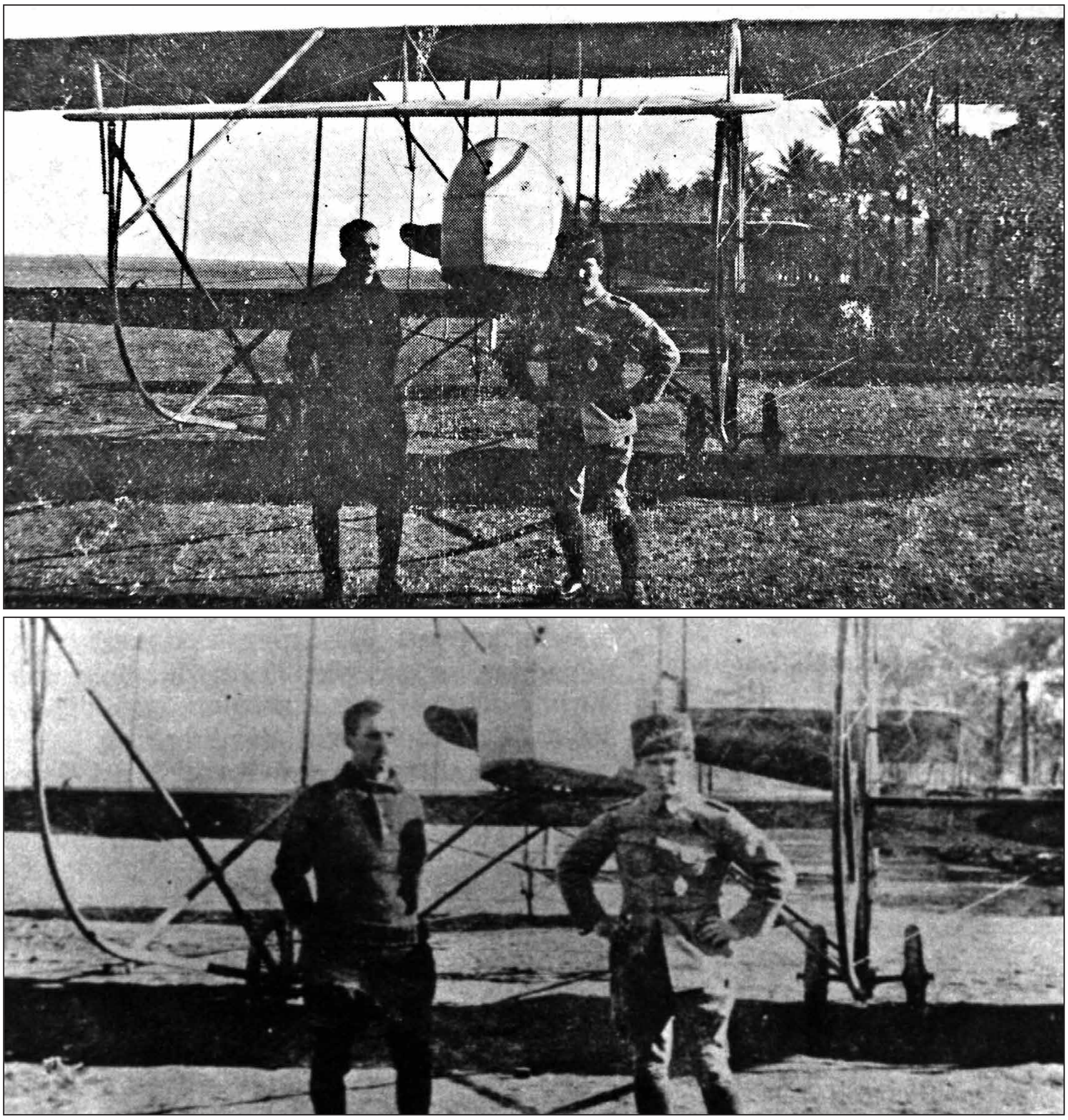
Some units never received the latest equipment but during 1917, X Aircraft Depot in Egypt was restructured as a Mobile Park like those which already existed in France. It now incorporated a First Reserve of aircraft ready to fly, which could be sent straight to squadrons which needed them, plus a Second Reserve consisting of damaged aeroplanes which were being rebuilt. These machines were certainly needed because the inevitable difficulties and delays of bringing equipment from Europe, or indeed from other parts of the British Empire, meant that spares and aeroplanes were always in short supply.

By June 1917, the RFC's support facilities in Egypt had been divided into more specialist depots. X Aircraft Depot itself was now at Alexandria, X Engine Repair Depot being at Abbasiya, and X Aircraft Park located at al-Qantara next to the Suez Canal. An ambitious and still little-known Middle East Aircraft Factory was also created (see below). Later that year, in October, RFC units supporting General Allenby's offensive against the Ottoman Army in Palestine were brought together in a new Palestine Brigade. As a result, the following month saw the old RFC Middle East Brigade become Head Quarters RFC Middle East. On 5 November Brigadier General Salmond returned to England on what was described as "special duty", being succeeded in Egypt and Palestine by Major General W.S. Brancker. Just over a month later, on 14 December 1917, there was yet another reorganisation when Brigadier-General A.E. Borton took over command of the RFC's Palestine Brigade.

Further restructuring in 1918 mainly affected the RFC's maintenance facilities in Egypt. These were expanded, including the establishment of a new X Balloon Repair Section at Abu Qir. Meanwhile, the Stores Section at Abu Qir remained a separate unit as X Aircraft Depot under Squadron Ldr. Ogden. At the start of 1918, Abu Qir had also been chosen as the site for the new Eastern Aircraft Factory. Here the British planned to build, or at least to assemble, aeroplanes for what was expected to be a prolonged campaign against the Ottoman Empire. This was the true start of aircraft manufacture in the Middle East although, in the event, the Ottoman Empire collapsed quite suddenly and very few flying machines were actually constructed at Abu Qir.

The importance of Egypt as an organisational and support hub for the RFC was now fundamental and the RFC's Aircraft Parks in Macedonia, Mesopotamia and even in India were also the overall responsibility of HQ Middle East. However, the most important administrative change of 1918 came on 1 April with the merging of the old RNAS and RFC into an independent new force – the Royal Air Force.

The main operational focus of Allied air units in Egypt was initially against Ottoman forces in Palestine and Syria, and the potentially mortal threat which they posed to the vital Suez Canal. However, the airmen were also called upon to deal with a threat from the opposite direction, from the Western Desert in the form of the Sanussi so-called "uprising" − in reality more of a Sanussi invasion. Sanussi forces were largely tribal, though stiffened and advised by a small number of Ottoman troops. Like the Ottoman military leadership in Syria, the leaders of this Sanussi movement expected to be widely welcomed by the Muslim population of Egypt. They were wrong, but the small number of overstretched British, Imperial and Egyptian troops available in Egypt to counter the Sanussi threat needed all the help they could get from whatever flying units were available.



Maurice Farman MF 7 of the RFC Half Flight (Indian Flying Corps number IFC2) was seized west of Baghdad by Ottoman forces on 13 November according to British sources, or 14 November according to Ottoman sources, 1915. Capt. T.H. White and Capt. F.C.C. Yeats-Brown were captured. Two of the Ottoman air arm's most experienced men, Fettah and Fâzil (on the left), were then sent to Iraq to restore the captured MF 7 to flying condition, after which several reconnaissance and training flights were made in the machine which by then had standard Ottoman national markings. (from the wartime Ottoman newsmagazine Harbi Majmu'asiya, Askeri Muzesi Istanbul)

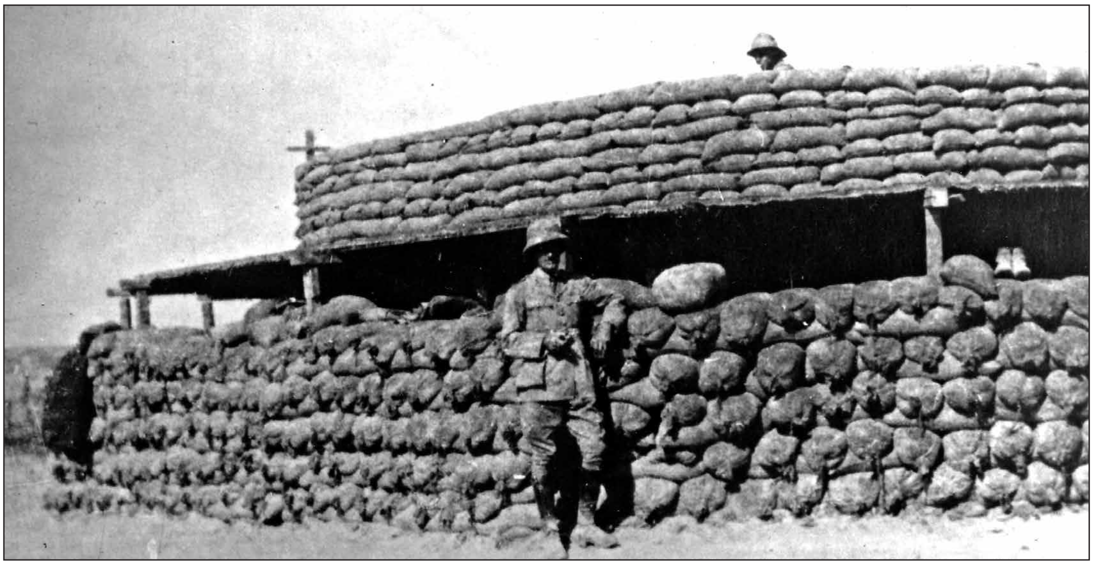
In the largely open terrain of Egypt's Western Desert, aeroplanes soon proved their worth, especially as aerial reconnaissance could cover much larger areas than was possible with traditional cavalry, camel-mounted troops or more modern armoured cars. At the start of this campaign most of the RFC's operational squadrons were concentrated at Heliopolis, supported by the Aircraft Park at Abbasia. But on 23 November 1915, No. 14 Squadron's A Flight with slow but reliable BE2c aircraft was sent to Marsa Matruh on the Mediterranean coast not far from the Libyan frontier. From here its men flew reconnaissance sorties over a broad area where an approximately 5,000 strong force of Sanussi, Bedouin tribesmen and Ottoman advisors were massing for a possible attack. During these flights the observers made sketches of enemy positions which were then passed to the British military HQ. On 8 December 1915, another detachment from No. 14 Squadron was sent to al-Gharaq Fayum to reconnoitre the Bahariya Oasis for signs of enemy troops. The latter were feared to include Ottoman soldiers. This type of operation, which involved No. 14 Squadron's Flights being scattered over a vast area of unforgiving desert, would remain typical of the entire campaign against the Sanussi, which continued for several months into 1916.

The Royal Naval Air Service (RNAS) was also called in to support the closing operations against Sanussi invaders who still held considerable territory in western Egypt. However, things did not always go smoothly. On 10 February 1916, the seaplane carrier *Ben-my-Cree* left Port Said for Alexandria, where it was joined by an escorting Italian Navy torpedo-boat destroyer. The two vessels then set course for the Gulf of Sollum where they paused. At dawn, one of the *Ben-my-Cree*'s Short 849 seaplanes took off on a photographic mission but was obliged to make an emergency landing due to engine trouble. The pilot and observer were rescued and brought back to the seaplane-tender by the *Charlsin*, a trawler which had been commandeered as an auxiliary ship by the Royal Navy at the start of the war.

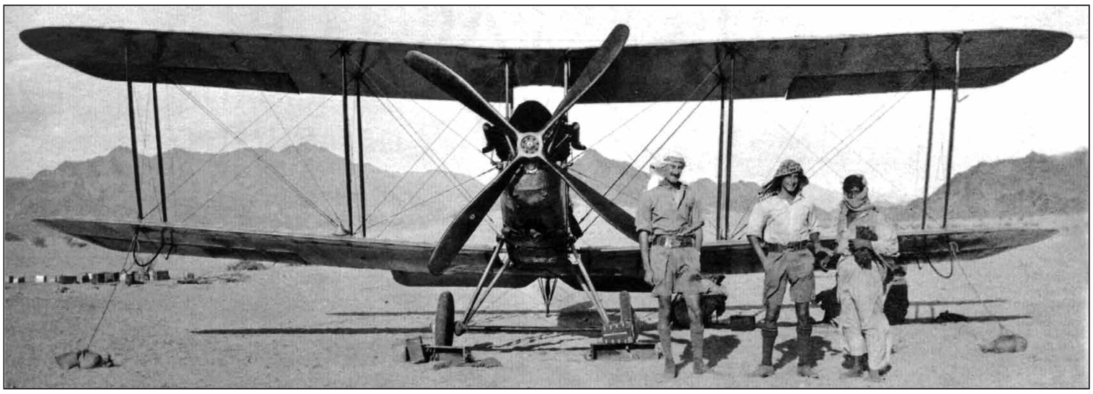
The *Ben-my-Cree* made no further attempts to send aeroplanes against Sanussi forces and instead returned to Port Said where, a short while later, the ship suffered minor damage due to a collision in the harbour. In the middle of May 1916, Commodore. C.R. Samson took over as the *Ben-my-Cree*'s new captain. Meanwhile in the desert, Sanussi forces continued to hold some of Egypt's Western Desert oases for many more months, while small numbers of Egyptian and British troops enjoyed a very limited degree of air support in their attempts to retake these isolated outposts of settled population. In contrast to the broad, open and largely flat expanses of desert which surrounded and separated them, the oases themselves were characterised by very dense agricultural vegetation. This hampered the effectiveness of air reconnaissance, as was noted by one British soldier on the ground, F.A. Bates of the Denbigh Yeomanry, who wrote in his diary on 10 September; "Aeroplane observation seems unreliable in this country (Bahariya Oasis) where there are thick groves of palm trees" (for the role played by British aeroplanes in support of Egyptian Army operations against the Sanussis' allies in the Sudan see Chapter 2).

Unfortunately, the positive aspects of the relationship between the British and Egyptians have tended to be forgotten. What has been more clearly remembered in Egypt is the appalling behaviour of many British and Imperial troops. Here I can do no better than to quote directly from *Wings over the Desert, In action with an RFC pilot in Palestine 1916-18*, by D. Seward;

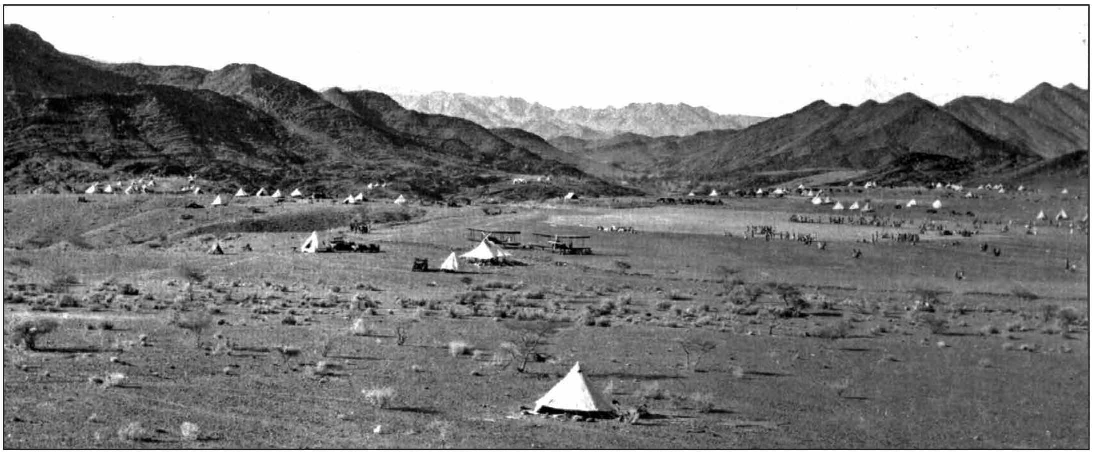
A peculiarly unpleasant relationship existed between the British and better-educated Egyptians, who naturally enough sympathized with their fellow Muslims, the Turks, privately referring to their city as 'Cairo the Neutral'…. Awareness of this sympathy did not endear the 'Gippies', as they were known, to their new (British) rulers…. The wild antics of drunken young officers embittered the relationship still further. Among these were after-dinner races in gharries (horse-drawn cabs) or the game of 'boarders away' – which meant (officers) jumping on board a horse drawn bus, making the driver go at full speed by threatening him with a swagger stick and then forcing all the Egyptian passengers to jump off. Other ranks, especially the Australians, behaved with even more brutality, shooting up bars and eating-houses.



A blockhouse made of sandbags and timber, located between Bahariya and Samalut west of the Nile, in June 1916. Such blockhouses were intended to hinder Sanussi raiding towards the Nile Valley and to protect a new narrow-gauge railway, some being manned by Egyptian troops and others by British forces, as seen here. (Egyptian Army Museum, Cairo)



Second Lt. Wilkinson & Captain Henderson with a local Arab assistant, in front of their BE2c after they landed at Baidha in the Hijaz. Note that the aeroplane's characteristic tall exhaust pipes have been removed. (Thomas Henderson Album, courtesy of Cross & Cockade International)



The RFC's Advanced Landing Ground at Gayadah in the Hijaz, with two BE2c machines. White tents were used by European or European-trained personnel, and were entirely different from the tents used by the indigenous Arabs – as clearly noted by Ottoman observation aircraft. (Thomas Henderson Album, courtesy of Cross & Cockade International)

Another little known and certainly more heroic aspect of the air war over Egypt was recorded by an anonymous inhabitant of an oasis west of the river Nile. It involved the epic flight of Zeppelin L59 to Africa and back in November 1917, in a vain attempt to link up with Governor Paul von Lettow-Vorbeck in German Tanganika. The L59 had crossed the Egyptian coast at Marsa Matruh then flew southward towards the oases of Farafrah and Dakhla. The Zeppelin crossed the Nile at the second cataract, just north of Wadi Halfa, then pressed on to approximately the same latitude as Khartoum. There the airship's commander received a wireless message, informing him that German resistance in East Africa had collapsed – which was not in fact correct – and ordering him to come back. The L59 therefore retraced its steps to its starting point in the territory of Germany's ally, Bulgaria. As a German aviation historian wrote not many years later;

The memory of the airship was preserved from the moment it was seen over the oasis of Dakhla. On 21 December, 1933, Karl Schwabe, the only German entrant in an international air race (actually a Tour of the Oases Air Rally supervised by the newly established Egyptian Army Air Force), was forced down at the oasis, where he noticed the crude outline of a Zeppelin scratched on the mud walls and wooden doors of the native village. From

> a Bedouin sheikh he learned that the strange symbol celebrated the observance of an apparition in the skies, a sign of heavenly good will.

The shaykh had then been a youth, but it was clear that the flight of L59 had become a local legend.

The main effort of the RFC and RNAS in Egypt was, of course, against Ottoman forces to the east and north-east. The threat to the vital Suez Canal had been appreciated from the start of the Great War and so an RFC detachment was sent to Egypt by sea as early as November 1914. It consisted of three Maurice Farman Shorthorns, two spare engines and two tented hangers. Their contribution to the defeat of the Ottoman assault on the Canal, operating from makeshift airstrips close to the waterway, was significant. In fact, they proved their worth at a very early stage, while the Army's defences along the Canal were being hurriedly strengthened. Meanwhile, Nieuport seaplanes from the French Navy seaplane tender *Foudre* had also been rushed to Egypt in December 1914 and were initially based in Port Said harbour.

At the time of the Ottoman advance into Egyptian territory the RFC's 5th Wing only had two squadrons in the country. These were No. 14, whose detachments were scattered between Ismailia, al-Qantara, Port Said and Sollum, and No. 1 Australian Flying Corps (AFC) Squadron which had two flights at Suez and one at Kharga Oasis while a third was forming at Heliopolis. No. 14 Squadron RFC would play a particularly prominent role in this campaign, though its men and machines were at one time remarkably scattered, with A Flight in the Western Desert, B Flight in Sinai and C Flight in the Hijaz – all at the same time. This may, in fact, have been a geographical record in the history of the RFC. On 3 May 1916 No. 14 Squadron suffered an early loss when Lieutenant C.W. Hill was shot down by ground fire while on a solo photo-reconnaissance of al-Arish. Later it was learned that the pilot had "managed to hold off pot-shooting Arabs for some hours before finally being taken".

The British at last began their slow and hard fought offensive against the Ottoman Fourth Army in the summer of 1916, by which time the RFC in Egypt had been formed into a small but quite effective force. From 19 July 1916 onwards, all available machines in Egypt were concentrated at Ismailia, Port Said and al-Qantara.

Following the defeat of a last Ottoman offensive in Sinai at the battle of Romani (3-5 August 1916), the British established an advanced landing ground there. Thereafter almost continuous reconnaissance was carried out. Nevertheless, the peculiarly extended and difficult conditions of the campaign to retake the Sinai Peninsula from Ottoman forces also resulted in some new and original uses for aeroplanes. For example, later in August 1916, following another small victory over the Ottomans at Maghdaba south-east of al-Arish, a wounded British officer was evacuated from by air in a BE2c. A photograph of the event shows this aeroplane with serial number 4155.

In the air, No. 14 Squadron's main opponents were the German fliers based at al-Arish since May 1916. The German aeroplanes were clearly superior to those available to the British and Australian aircrew but, nothing daunted, on 18 June 1916, No. 14 Squadron at al-Qantara sent eleven BE2cs to bomb al-Arish aerodrome from an altitude of 200 metres. Thereafter the RFC's 5th Wing continued to support the British Egyptian Expeditionary Force's advance across Sinai during the rest of 1916 and into early 1917. Even so, one of the main reasons for British defeat in the subsequent First and Second Battles of Gaza was a lack of accurate information about Ottoman dispositions.

It was one thing to take the offensive in the air, attacking the enemy deep in the Judean Hills of Palestine as British RNAS aircraft did on 23 June 1917. It was quite another to have enough machines to win sufficient air superiority to get the detailed information which the Army so desperately needed. Nevertheless, by July 1917 the British had one Wing with two squadrons and a Balloon Company on the ground in Palestine.

RFC pilot F.A. Bates, whose adventure with a failing engine while training in Egypt has already been mentioned, now found that his duties included dropping propaganda leaflets. In his diary entry for 20 July 1917 Bates recounted that; "On our tactical recce jaunts we drop literature in Turkish and Arabic, enlightening the enemy about the Great War. We are even kind enough to present him with illustrated papers specially designed to impress him with the might of the Allies and other things such as the happy lot of Turkish prisoners. He generally expresses his thanks for our kindness by turning on his machine-guns".

Bates then recorded another of the rather unusual problems that the RFC faced in this theatre of war, even when not actually in combat; "A few days later we were sent out on a practice artillery shoot with the Royal Horse Artillery. The battery put out a T (a visual direction marker for the aeroplanes) but we came home as it seems that Bedouins stole the target during the night!" In August, the men of No. 14 Squadron were joined by their C Flight which had been cooperating with the Arab Revolt and its advisors in the Hejaz. Meanwhile No. 5 Wing had been concentrated at Dayr al-Balah in what is now the Gaza Strip in south-west Palestine before the fall of Gaza. It would remain there until after the Third and victorious Battle of Gaza. The RFC then advanced to an airfield near al-Majdal but, after a brief stay, moved on again after the fall of Jerusalem.

F.A. Bates suffered a serious crash at the very end of 1917, being so badly injured that his heavy leather flying coat had to be cut off him. It had, however, offered some protection in the crash so Bates had this coat repaired by a "skilled native craftsman" and continued to use it in his later sorties. Meanwhile, Brigadier-General Salmond returned to Egypt early in January 1918 with a new rank of Major-General, to take overall command of the RFC in the Middle East; his predecessor Major-General Brancker returning to England.

As soon as the British advance across Sinai and into Palestine stalled at the First Battle of Gaza, a static front developed. Comparisons with the Western Front are not particularly useful, but it is interesting to note that one of the first true maps based upon an overlaid mosaic of aerial photographs was made by the British of Gaza in January 1917. A prolonged period of trench warfare in southern Palestine also meant that observation from tethered balloons became very important. However, at the start of 1916 the British in Egypt still only had old Spencer balloons designed for "fortress" warfare. There were two Balloon Sections at the front, No. 13 under Lieutenant A.G.T. Applin and No. 14 under Flight Lieutenant A.W. Cassey, these being under the overall direction of Commander F. R. Wrottesley. They provided observation for British, Australian and Imperial Indian units as well as for the Royal Navy which bombarded Ottoman positions from the sea. Their task was nevertheless far from easy as the local terrain was flat and lacked many clearly distinguishable natural features. Furthermore, the names of those features, natural or man-made, which did exist had what were, for the British balloon observers, unpronounceable names. Nor were the names of many other minor but, for troops on the ground very important, natural features mentioned on rudimentary available maps.

Then there was the problem of morale-sapping boredom among balloon observers who had to stare at the same stretches of sandy horizon for months on end. The terrain became hillier and more interesting, if also more difficult to observe, following the British breakthrough in 1917 and 1918, but this itself presented additional dangers. The hill country in which No. 54 section found itself in 1918 gave cover to enemy aircraft which could make surprise attacks upon any balloon in the air. For example, while trying to observe an engagement on the ground more clearly, Lieut. W. H. Hargreaves set up a Middle East height record on 8 May by ordering his ground crew to allow his Cacquot balloon up to 1,600 metres. Almost at once an enemy Albatros scout pounced, setting fire to the balloon. When Hargreaves took to his Spencer parachute, the ground crew claimed that the enemy aircraft shot at him, cutting the cords of the parachute which collapsed. Lieutenant Hargreaves was killed.

The following day the other RFC Balloon Sections each also lost a balloon. One of these was from the Section based at Attara, its observer H.R.P. Collett parachuting to safety having reportedly been downed by a Bulgarian NCO attached to the German or Ottoman air forces. According to Ottoman records a balloon was downed by Lieutenant Senfert of the German 302nd Pasha Squadron on 4 May, another being attacked by Sergeant Vinerhaus of Jasta II Fighter Section on 9 May, and a third brought down on fire that same day by Lieutenant Gustav Chedelvind of the German 300th Pasha Squadron. Another British observation balloon was also claimed by Ottoman coastal artillery in May 1918.

At the end of May, No. 50 Balloon Section was disbanded. However, No. 57 Section soon started operations on Palestine's Mediterranean coast. August would be a very busy month for the British balloon crews, observing for three hundred and sixteen artillery shoots. They were sometimes in the air for a long time, as when Lt. L.W. Baker provided information on no less than thirty-two separate targets and remained aloft for five and a half hours. This was in preparation for General Allenby's great offensive which shattered the Ottoman front and surged on into Syria and Lebanon. By the end of this campaign the British Balloon Sections had been left far behind. The task of observation reverted to aeroplanes and even to cavalry, while the balloons had all been deflated – their task completed. They were still "on strength", of course, and in September 1918 the newly formed RAF's order of battle on the Syrian front consisted of a Brigade with two Wings (seven squadrons) and No. 21 Balloon Company with its HQ at Sarona. This Company itself consisted of No. 49 Section near Khan Hadra, No. 57 Section near al-Tirah and the disbanded No. 50 Section near Shaykh Muwannis.

The new importance of oil rather than coal as fuel for many of the Royal Navy's most modern warships meant that, within weeks of the start of the First World War, a British division was dispatched from Bombay in India to secure the Persian Gulf island of Abadan, its port, the pipeline to the nearby Persian oil fields and the oil fields themselves. This was in contravention of Persian (Iranian) neutrality though seemingly in agreement with the local Arab tribe, Banu Ka'ab, whose leader, Shaykh Khaz'al Khan, already had an agreement with the Anglo-Persian Oil Company. Shaykh Khaz'al would, in fact, support the British throughout the war. In November 1914 British forces crossed the frontier into Ottoman territory and seized control of the strategically important town and port of Basra, marking the real start of what became the Mesopotamian Campaign.

British operations against the Ottomans in Iraq (then known to Europeans as Mesopotamia) were the responsibility of the British Imperial Government of India. Most of the Allied troops involved were also from India and at first they had no air support whatsoever. Here, as elsewhere, Ottoman resistance proved to be much more formidable than anticipated and so, on 8 February 1915, the Australian government was asked to help. The Australian Air Force (AFC) was still very new and so could only offer aircrews and ground staff for a mere half Flight. This unit was consequently known as the Mesopotamian Half-Flight or Australian Half-Flight. Captain Henry Petre was put in charge and was fortunate in having his tiny force strengthened by some personnel from New Zealand and the British Indian Army. Still lacking any aircraft, Petre's Half-Flight left Bombay for Basra on 20 April 1915.

On coming ashore in southern Iraq just over a month later, the unit was given two Maurice Farman Shorthorns and a Longhorn by the British Indian government. These planes were obsolescent or, in the case of the Longhorn, actually obsolete. Furthermore, the archaic Longhorn suffered chronic mechanical problems and spent much of the time under repair. Even when operational, these machines were unsuitable for desert conditions. With a speed of only 80kms per hour, they had been sent to an area where the desert winds often reached 130kms per hour. Furthermore, the hot desert air so reduced the aeroplanes' lift that they were sometimes unable to take off at all.

Nevertheless, the Maurice Farmans were sent on reconnaissance as soon as possible. The British Indian troops then captured the southern Iraqi town of Amarah, to which the Half-Flight moved on 9 June. A little under a month later the old Maurice Farmans were joined by two Caudron G.3 aeroplanes which, though far from up-to-date, were considerably more efficient. However, on 30 July, one of the G.3s had to land in enemy territory, reportedly due to mechanical problems. The crew tried to escape to Allied lines but, after a running gun battle with local inhabitants, were reportedly killed. Lieutenants George Pinnock Merz an Australian, and W.W.A. Burn a New Zealander, thus became their countries' first air-war casualties.

During August 1915, the Mesopotamian Half-Flight was at last re-equipped with four relatively modern Martinsyde S.1s, and on 24 August, the unit was officially attached to No. 30 Squadron RFC. For some time, it thus formed a very "detached" B Flight while the rest of No. 30 remained in Egypt for several weeks. In September the British and Indian forces in southern Iraq were strengthened by the arrival of three RNAS Short 827 seaplanes with their crews under Squadron Ldr. Robert Gordon. These were attached to the Half-Flight in the expectation that their seaplanes would operate from the river Tigris. Unfortunately the river proved to be too shallow in the height of summer, so the crews had to revert to the old Shorthorns until their Short 827s could be fitted with wheels.

On 27 September 1915 Kut al-Amarah (also 'al-Qut') fell to General Townsend's British and Indian troops, and the Half-Flight moved there. In October the rest of No. 30 arrived from Egypt with its BE2c aircraft. They were certainly needed because local Arab tribal warriors were operating in support of the Ottoman Army on the exposed flanks of the invading forces. In early October 1915, while Townsend was preparing to advance against Ottoman defences south of Salman Pak (Ctesiphon), Commander Gordon's Short seaplanes, now converted into landplanes, flew a long-distance reconnaissance mission to Badrah, north of al Qut and near the Persian (Iranian) border. Here they found what was described as a "hostile Arab camp".

A few days later this was bombed by two Farmans and a Martinsyde flown by Major Reilly, Lieutenant Fulton and Captain White. They dropped a total of twenty bombs on the encampment which, of course, also contained women and children as well as supposedly hostile tribesmen. Considerable damage was reportedly inflicted and the "hostiles" promptly surrendered. It was a sign of things to come in this part of the world. Lieutenant Fulton was himself forced down by ground-fire on 22 November. He was captured and his Martinsyde S.1, identification number 8, may have been the Martinsyde which was then given Ottoman national markings, though not apparently flown by them, before subsequently being recaptured by the British.

Cdr. C.R. Samson, commander of the RNAS detachment aboard the seaplane carrier HMS *Ben-my-Cree*, being hoisted aboard after the engine of his Sopwith Schneider broke loose when landing on rough water on 13 September 1916. He had just returned from a reconnaissance of Beersheba. (C.R. Samson Album)

The Mesopotamian Campaign ground on through 1916 and British advances on this front during 1917 continued to be hampered by high winds and dust storms which occasionally almost grounded the flying units of both sides. Nevertheless, these aeroplanes played a very important role. Some sorties were also unusual. For example, on 7 March two pilots from No. 30 Squadron flew two specially selected engineering officers from their aerodrome, penetrating deep inside enemy-held territory before landing next to the strategically important Baghdad-Samarra railway line. They then tried to blow up a section of this line to prevent the enemy bringing up heavy artillery guns. However, hostile Arab tribal auxiliaries foiled the attempt and the British aeroplanes had to take off hurriedly amid a storm of rifle-fire.

Other, more normal operations posed a variety of risks. These could be political, as when a British BE2c mistakenly bombed the minaret of a particularly sacred mosque in Qut al-Amarah on 9 February 1917 and thus outraged local Muslim opinion. Otherwise, the dangers were comparable to those faced by flying men on all fronts during the First World War. On 3 April 1917 a BE2c of No. 30 Squadron collided with an enemy aeroplane but survived. Ottoman records incorrectly identified the British machine as a Bristol, stating that it had been intercepted by the German pilot Lieutenant Schüz who was flying a Halberstadt D.V from the Mosul Aircraft Park. Their wings touched and, according to Schüz, the British aeroplane crashed. In fact the BE2c was repaired and subsequently transferred to No. 31 Squadron RFC in India.

Enemy airfields were very dangerous targets, as when Kifri aerodrome – the home-base of the German Fl. Abt. 13 – was attacked by RFC Martinsydes on 16 September 1917. One of these, flown by a pilot named Skinner, came in low to strafe a German machine on the ground, but in so doing got a bullet through his fuel tank which rapidly drained away. Skinner had to land in the Iraqi desert deep inside enemy territory. While he set fire to his aeroplane, a colleague named Welman landed alongside, but then Welman's engine stopped and Skinner had to swing the propeller to start it. Meanwhile a third pilot named Nuttall circled them, shooting at Turks and Arabs who had seen the British aeroplanes land and were hurrying to the area. As soon as Welman's engine fired, Skinner leapt onto the root of the lower wing and tucked his legs into the cockpit behind the pilot. In that precarious position he held on for dear life as they flew back to their home airfield, escorted by Nuttall.

These Allied pilots escaped capture by the Ottomans but some others were not so fortunate. Three RFC officers who became prisoners of war were Captain R. Philpott, Captain M.G. Begg, and Lieutenant E.N. Baillon. A diary of their journey from Iraq to a prisoner of war camp in what is now Turkey recalled how, on 28 September 1917 at a place identified as Sharaimiah, the captives: "were visited by (the) Chief Arab, a dear old man who said we should be well treated as we (as pilots) were above ordinary beings!"

Then, on 30 September;

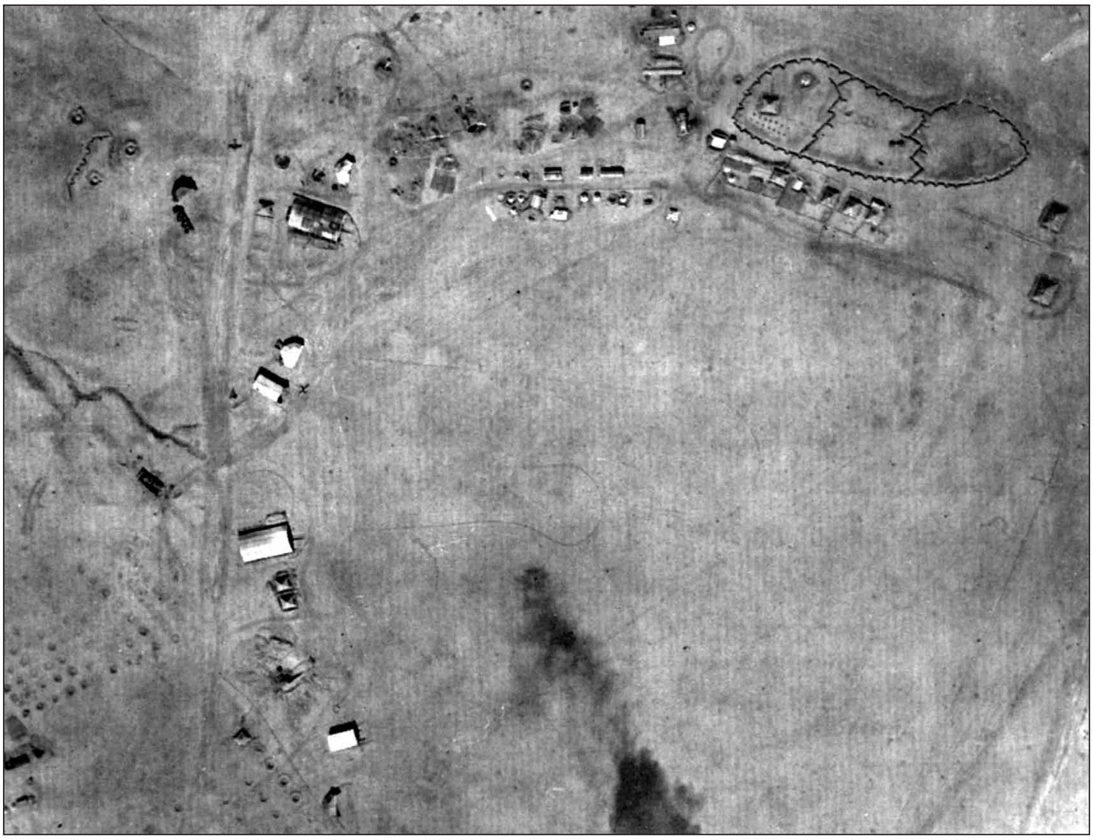
> We had a great friend during this whole trip in a little officer who spoke French and looked like a mixture between Don Q (Quixote) and Napoleon. This officer, Moifak by name, was according to his own statement head of the Arab senate and very anti-Turk. He had been trying to escape to our lines, but the authorities gave him duty well behind the lines and watched him very carefully. Begg (one of the captured pilots) tried to pump him re chances of their escape, could he help them, etc., but he was too terrified of the Turks.

This man was later referred to as their "Turco-Egyptian friend" which suggests that he was probably one of the officers of Egyptian origin who served in the Ottoman Army during the First World War.

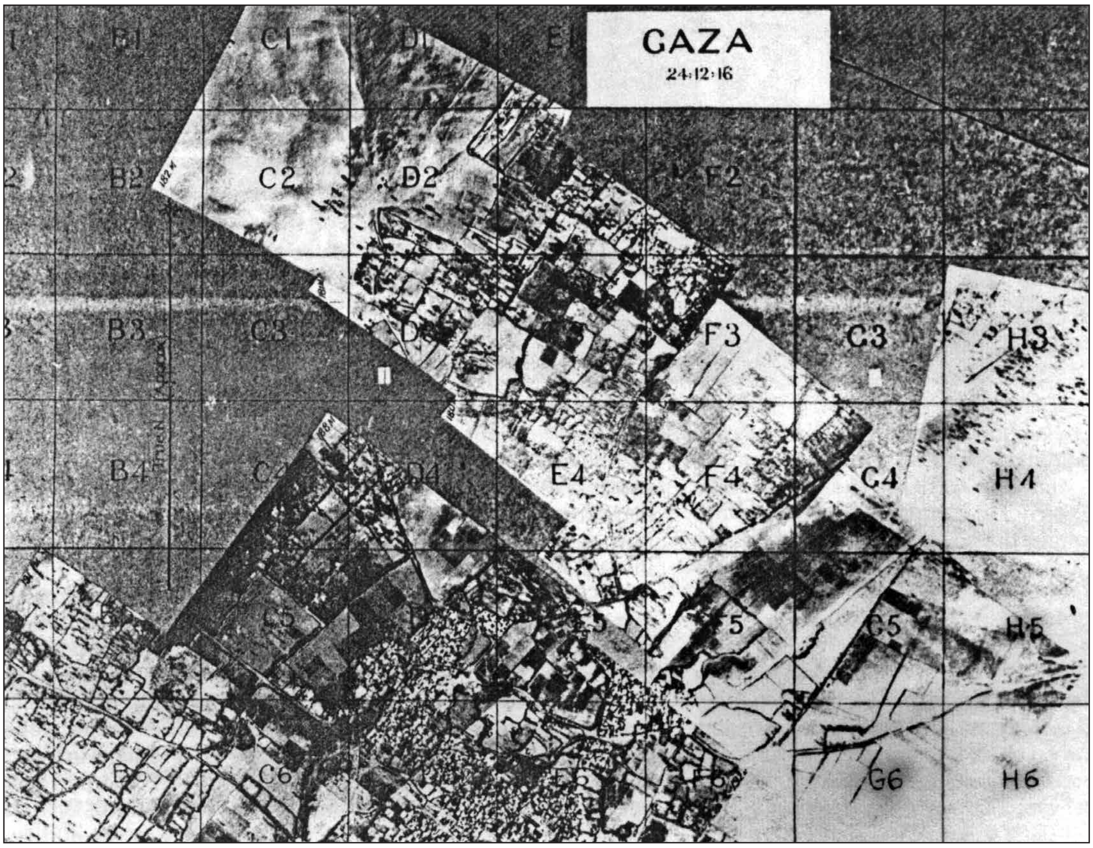
The year 1918 saw bitter fighting as well as further curious missions by the RFC and AFC in Mesopotamia. For example, in April 1918 two pilots from No. 72 Squadron were ordered to put on an aerobatic display to impress a Kurdish tribe. The tribesmen were apparently so impressed that their leaders decided to support the British cause. This approach sadly remained unusual. Far more typical was a mission later that same month by the same squadron, which was sent to reconnoitre the encampments of some tribes who were described as "being in the pay of the Ottoman Turks". In reality, of course, the Ottoman Sultan was still these peoples' legitimate sovereign, but not long afterwards several of their camps were bombed and machinegunned by British aircraft.

In the closing weeks of the war against the Ottoman Empire, British forces of the so-called Dunsterforce were sent from Iraq, across western Iran into what is now Azerbaijan. They were supported by part of No. 72 Squadron RFC in an effort to stop the oilfields of Azerbaijan falling into the hands of either the Russian Revolutionary Red Army or the Ottoman Turks' "Army of Islam". The latter was the enfeebled Turkish empire's last – and surprisingly successful – effort during the First World War. To the astonishment of the otherwise victorious British Imperial forces in the Middle East, Dunsterforce was defeated at the Battle of Baku (14-15 September 1918) by the Ottomans. The British had to retreat back into Iran, abandoning their two Martinsyde Elephant aeroplanes, and finally returned to Iraq. This last success of Ottoman arms did not, of course, alter the outcome of the war and the Ottoman government sued for an armistice only a short while later.

British air operations in support of the Arab Revolt were very important, though with the tiny numbers of aeroplanes involved on both sides, and the vast area of desert where the opposing air forces operated, it is hardly surprising that there were no air combats. These operations could be said to have started with the arrival of a Royal Navy seaplane carrier off the coast of the Hijaz just before the Arab Revolt broke out. It was, in fact, steaming down the Red Sea on its way to support the British garrison in Aden.

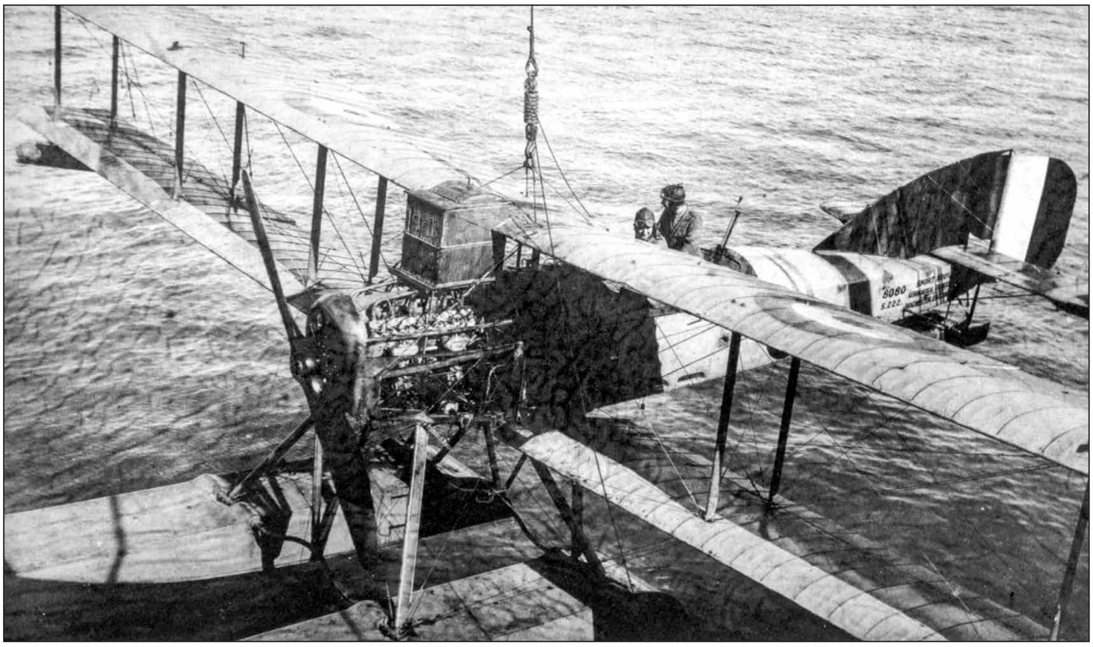


Beersheba aerodrome in southern Palestine, photographed from the air on 11 November 1916, almost certainly while it was under attack by aeroplanes of the RFC's 5 Wing on that same day. (Cross & Cockade International Archive)



The photographic mosaic of Gaza made by the RFC was one of the first such aerial reconnaissance mosaics, though incomplete. Dated 24 December 1916, it was subsequently published in The Cartographic Journal, the official magazine of the British Cartographic Society. (Royal Geographical Society Library)

On 14 May 1916, Commander C.R. Samson took command of the RNAS detachment aboard the seaplane carrier *Ben-my-Cree*. The following month he was ordered to provide support to the nascent Arab Revolt, specifically the Arab force under the Amir Faysal, son of the Sharif of Mecca who led the Arab Revolt, who were currently besieging a substantial Ottoman garrison surrounded in the port of Jeddah. The



Flight Sub-Lieutenant Guy Duncan-Smith & Captain W. Wedgewood Benn being hauled aboard HMS *Ben-my-Cree* in their Short Type 184 seaplane number 8080 on 27 December 1916 when they attacked a railway bridge on the coast of the Gulf of Iskenderun (Alexandretta). The dark fin and rear fuselage stripe may have been painted red to indicate a Flight Leader. (Elliot Millar King Albums, Puke Ariki Collection)

Stores, including petrol cans, being loaded on or off baggage camels at one of the RFC's Advanced Landing Grounds in the Hijaz. Local Arab assistance as well as the camels themselves were essential when it came to supplying these isolated outposts. (Thomas Henderson Album, courtesy of Cross & Cockade International)

enemy's trenches curved in an arc around the little town, extending over a kilometre. Several British warships had been shelling the enemy's defences with little success because the trenches were mostly invisible to the ships. Meanwhile the leaders of the Arab Revolt refused to allow an "infidel" landing party to come ashore next to what was in effect the port of the Muslim sacred sites of Mecca and Medina. Seaplanes taking off from, and landing on, the water was a different matter, and so the seaplane carrier *Ben-my-Cree* was sent to Jeddah.

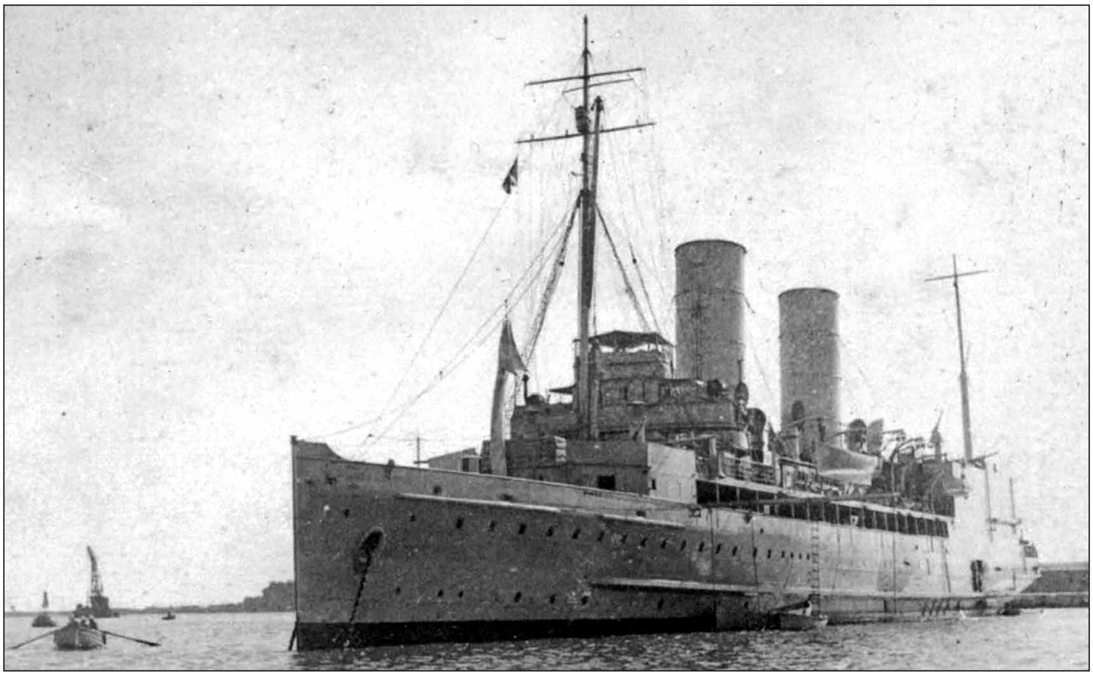
The ship arrived on the morning of 15 June 1916 and one of its Short seaplanes made the first reconnaissance sortie that afternoon. Others soon followed, but the Ottoman troops were under skilled and, in many cases, combat experienced officers, some of whom may have already encountered enemy aircraft in the Balkan Wars or in Libya. Though only armed with rifles, they shot at the British aeroplanes using volley-fire by sections, and one of the Shorts was soon damaged. Ottoman efforts to break the siege of Jeddah nevertheless failed and the garrison surrendered, after which the *Ben-my-Cree* was replaced by the seaplane carrier *Anne* which remained in the Red Sea until 11 July.

Once the Arab Revolt proved to be a serious affair, worthy of Allied support, the British agreed to send 1,000 Arab volunteers from among the many Ottoman Army prisoners of war in Egypt. Most were of Syrian origin, and they were also supplied with some old artillery pieces. Forces of the Arab Revolt soon took the small Red Sea port of Rabigh but this remained vulnerable to an Ottoman counterattack, so naval support from Allied warships was needed. The Royal Navy agreed to give such support, even though British fortunes against the Ottomans elsewhere in the Middle East were in a very shaky state.

Despite Rabigh remaining vulnerable, the British also agreed to establish a small airfield there in September 1916. Set up by a Royal Navy landing party and men from the RFC, the airfield itself was guarded by Egyptian Army troops who had been sent to support the Arab Revolt. Fortunately, the area around this airfield was still within range of the Royal Navy's covering fire. Though known as the Arabian Detachment, this little RFC unit was, in fact, C Flight of No. 14 Squadron. It consisted of six BE2c aircraft, with their pilots, observers and ground crew under the command of Major A.J. Ross. All went relatively well until BE2c number 4483 was lost on 30 April 1917. Its crew had to make an emergency landing in the unforgiving Wadi Hamadh. The aeroplane was damaged and could not be recovered, so its engine was removed for transfer back to X Aircraft Depot in Egypt, while the airframe was burned. As the Arab Revolt expanded territory under its control, the Arabian Detachment moved north to another small airfield at al-Wijh in July 1917. Like their Ottoman opponents, this isolated RFC unit found that its equipment suffered severely from the fearsome Arabian climate. Three of the original BE2cs were dismantled and shipped back to Egypt.

Less than a month later, on 1 August, the RFC's Arabian Detachment ceased operations in the Hijaz and re-joined the rest of No. 14 Squadron. This was by now based at Dayr al-Balah near

Gaza, commanded by Major C.E. Hastings Medhurst. The squadron's primary task was, of course, to support General Allenby's Egyptian Expeditionary Force against the Ottoman Fourth Army in Palestine, but on 28 August 1917 four machines from No. 14 undertook the first Allied sortie over what would later become the Kingdom of Jordan. This was again in support of the Arab Revolt, or more particularly its Northern Army, which was attacking Ottoman positions in and around Ma'an railway station. In January 1918 six RFC aeroplanes were also stationed outside Aqaba to continue such direct support of the Arab Revolt and to fly reconnaissance sorties. From then onwards, the RFC and the Royal Australian Flying Corps supported the Arab forces until they reached Damascus, though they never achieved the total air superiority over the outnumbered Ottoman airmen which they claimed.

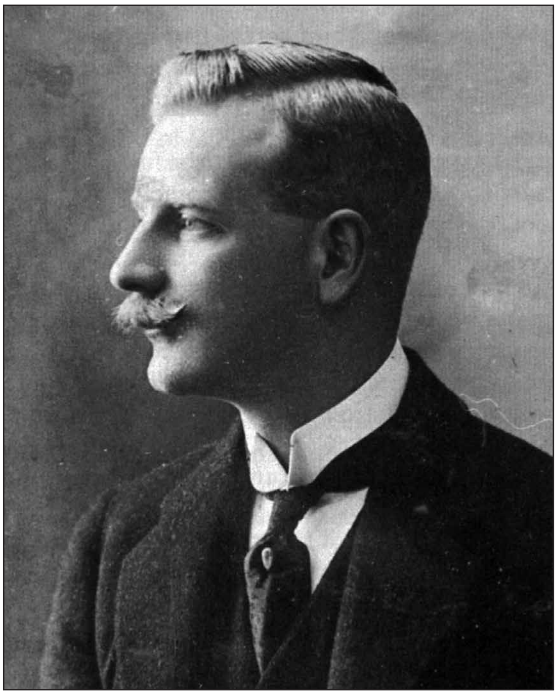


The Royal Navy seaplane tender HMS *Ben-my-Cree* at anchor in Port Said, at the northern end of the Suez Canal in Egypt. (Elliot Millar King Albums, Puke Ariki Collection)

The role of air power in the southern part of the Arabian Peninsula during the First World War has rarely been recognised. Such "side-shows of side-shows" are often overlooked altogether and, of course, only one side of the conflict had any aeroplanes at all. Nevertheless, the impact of a small number of British flying units was significant, not least upon the minds of local peoples.

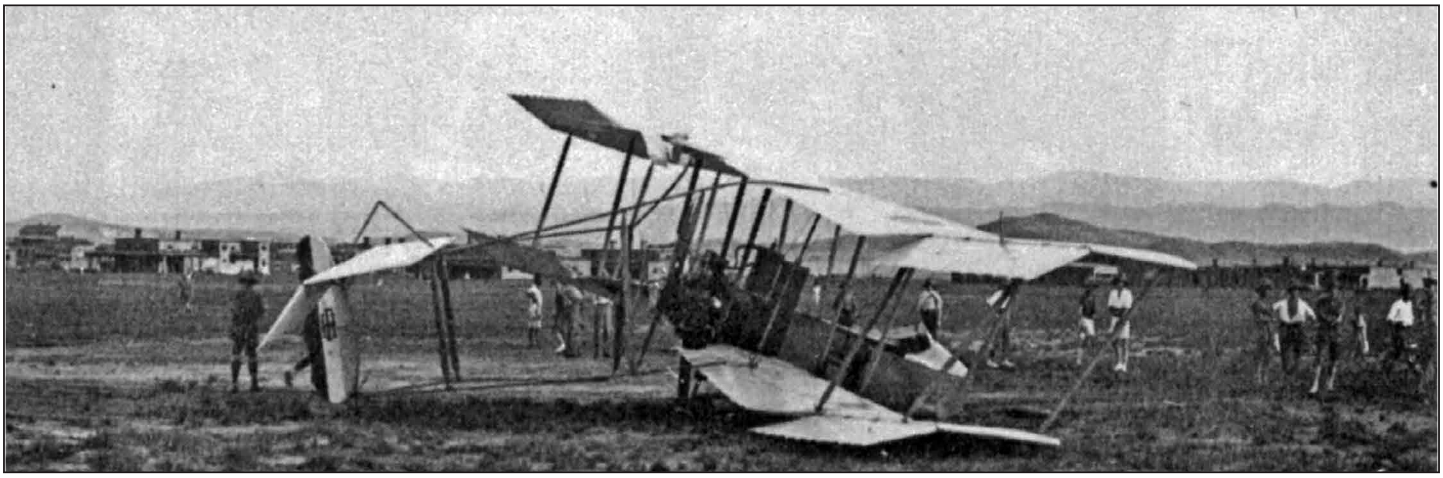
The province of Asir, which is now part of Saudi Arabia, was, during the Great War, the scene of another uprising against Ottoman rule. Mountainous and relatively fertile, it lies between the Hijaz to the north and Yemen to the south. Here, local tribes led by a religious leader named Sayyid Muhammad al-Idrisi had received some support from Italy during the recent Italo-Turkish War. By 1914 these Idrisids had been confined to the hills by the Ottoman Army, but rose again after the Ottoman Empire entered the First World War. Actually, the Idrisid uprising was the first such rebellion in the Ottoman Empire's Arab provinces, and on 1 April 1915 Sayyid Muhammad al-Idrisi allied himself with the British Imperial government in India. Thereafter his followers tied down the Ottoman Army's 21st (Asir) Division until the end of the war.

The British were so worried about an expansion of French or Italian influence in the Red Sea area that they were initially reluctant to support al-Idrisi's revolt. Nevertheless, by taking control of a section of the Red Sea coastline, through which Idrisid rebel forces could get outside aid either from the British or the Italians, Muhammad al-Idrisi posed a potentially serious problem for the local Ottoman garrison. Fortunately for the Ottomans, rivalry between the Allies weakened their effectiveness and indeed a British agreement with Sayyid al-Idrisi in 1917 was primarily intended to forestall an expansion of Italian influence in the area, though it also recognised the Idrisids' claim to the Farasan Islands, which the British Royal Navy had recently taken from the Ottomans. While refusing to allow the French, and latterly the Italians, to provide effective support, the British themselves gave very little to Sayyid al-Idrisi's forces. Nevertheless, the Idrisid uprising was not entirely without air support during the great conflict.

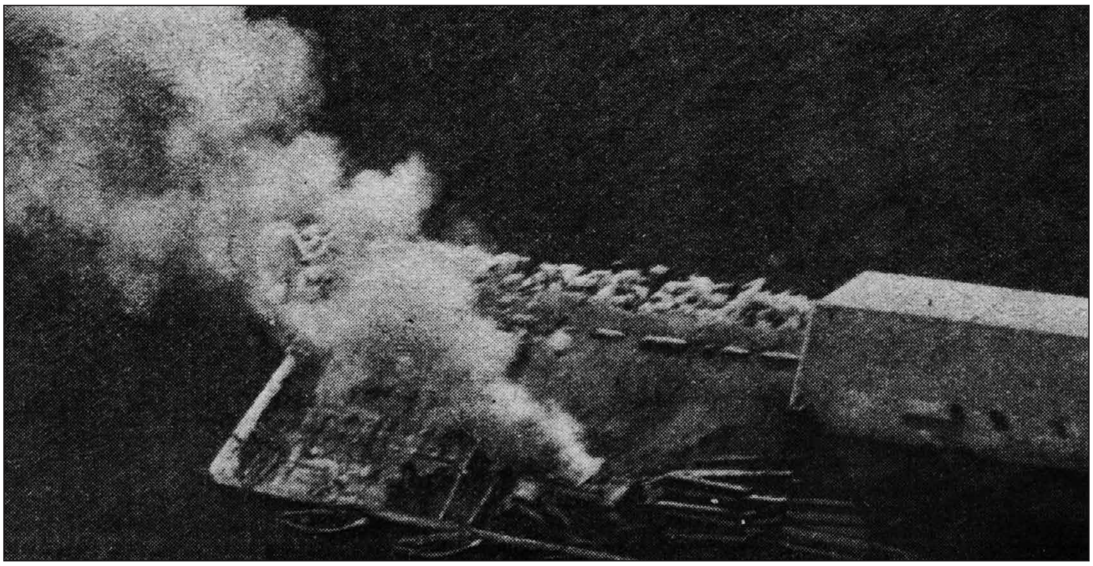


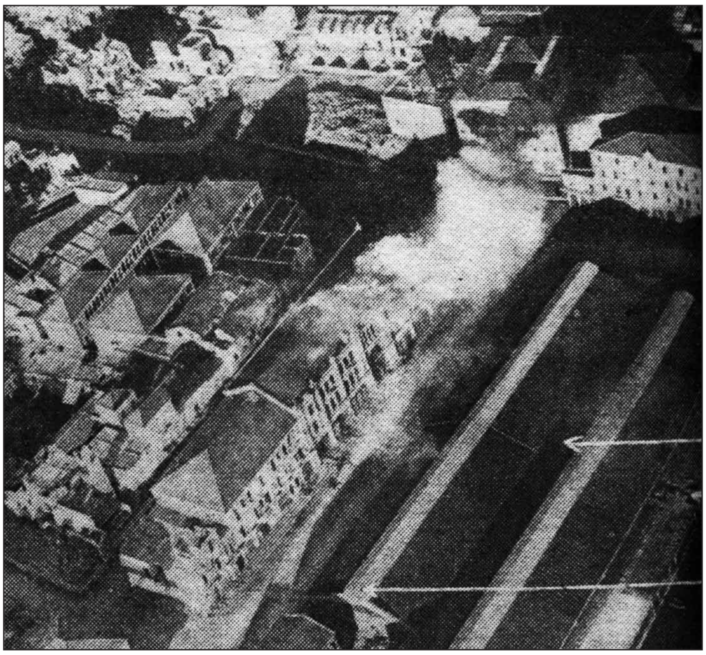
Major David Edmund Stodart, Commanding Officer of both the aeroplanes and the kite balloon section in Aden during 1917-18. Having qualified as a medical doctor, Stodart learned to fly at Hendon and served with distinction on the Western Front. After the Great War he remained in the RAF with the rank of Squadron Leader before returning to medicine in 1931. (Royal Aero Club)

Early in 1918, the British Royal Navy seaplane carrier *City of Oxford* was lying off al-Luhayyah on the Red Sea coast of Yemen and, on 22 February, it sent up an aeroplane to study and photograph Ottoman positions at Jabal al-Mihl and Zuhra, after which the enemy was repeatedly bombed over several days. Indeed, the raids were so effective that, by 28 February, Idrisid forces were able to extend their control further into the hills. The Ottoman Army HQ at Zuhra was also specifically targeted at the request of the Idrisid leader. This was to impress some local Yemeni tribal auxiliaries, many of whom



A Henri Farman F.27 of the RFC's No. 31 Sq. in India, where it has clearly crashed. A number of this unit's Farman F.27s were sent to the Aden Flight of No. 114 Sq. (courtesy of Cross & Cockade International)





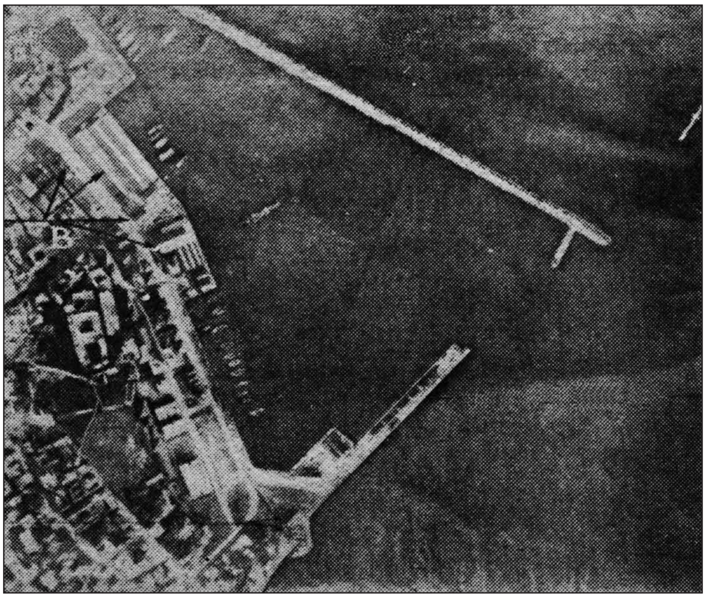
Two aerial photographs taken in May 1917, during subsequent attacks on Beirut harbour by RNAS Short 184 Seaplanes operating from HMS *Empress*, escorted by the French destroyers *Coutelas* and *Pierrier*. a) Stores outside a warehouse at the end of the eastern mole hit by bomb on 13 May. b) A large warehouse next to the western end of the harbour hit on 17 May. When originally published this second photograph was described as a hit on Beirut's railway offices and railway sheds. (Originally published in *The War Illustrated*, 3 November 1917)

now abandoned the Ottoman cause and gave their support to Sayyid Muhammad al-Idrisi. On 19 March *City of Oxford* moved north to lie off Maidi, from where her seaplanes flew over the town and over the Wadi Habil to impress the locals. Bombing raids also again targeted Ottoman positions on the hills of Jabal al-Mihl. Three days later *City of Oxford* was back off al-Luhayyah where her seaplanes made further demonstration flights.

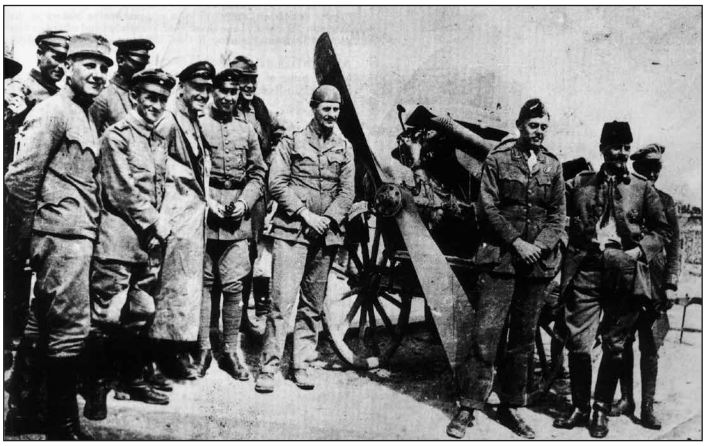
Though there had been many anti-Ottoman risings in northern Yemen over the years, by 1914 Ottoman rule had been consolidated, partially as a result of the Treaty of Da'an in 1911 which left the Imam Yahya Muhammad Hamid al-Din of the Shi'a Zaidi community of Yemen holding religious sway in the highlands while everyday administration was largely left to the Ottoman authorities. Yahya Muhammad himself had been born in 1869 and took over as Imam of his religious community on the death of his father in 1904. He would become Imam of Yemen as a whole on the withdrawal of Ottoman authority, at the end of the First World War. Back in the late 19th century the Ottomans had also started recruiting tribal levies to create four battalions of gendarmerie and three cavalry regiments, and this is seen by some historians as the birth of the modern Yemeni army.

Meanwhile the British Imperial Government of India controlled the port of Aden. British India also had nominal authority over the inland tribes of what would later become the Federation of Southern Arabia before this ephemeral state joined "northern" Yemen to create the modern Yemeni state. Here the Abdali Sultans of Lahij had been allies of Britain since their sultanate became part of the British Protectorate in 1902.

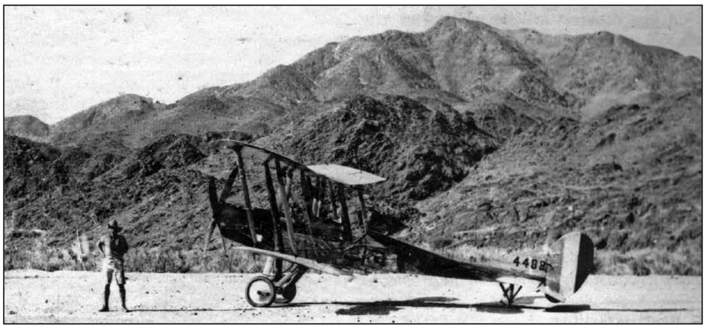
In 1914 the Ottoman Empire entered the First World War as an ally of Germany and Austria-Hungary. The resulting struggle around the strategically vital port of Aden was the most important of the southern Red Sea side-shows. Here it was the British who were on the defensive against a vigorous and, by any standards, heroic campaign by the small, isolated and soon to be cut off Ottoman force which garrisoned Yemen. Many of the local peoples were, of



A reconnaissance photograph of Beirut harbour which was used to identify targets for a subsequent air attack. (Originally published in *The War Illustrated* on 3 November 1917)

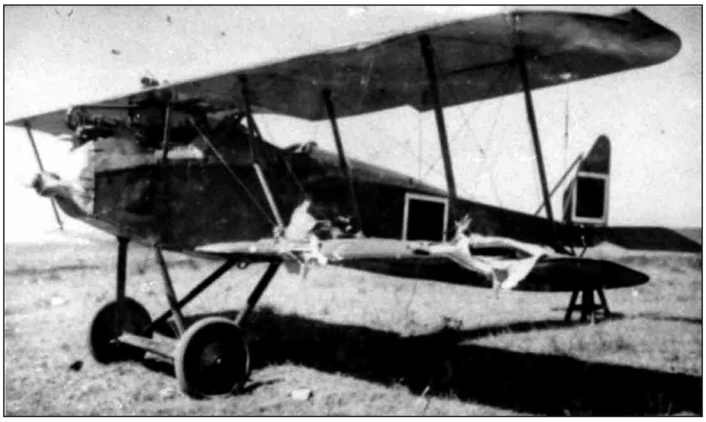


Second Lt. C.V. Palmer and Lt. E.A. Floyer of No. 14 Squadron RFC with German airmen and two Austrian officers after they were shot down on 5 March 1917. The Germans had also retrieved the engine from the downed BE2c machine. (Hamshaw Thomas Album, via Jim Hitchcock)



Another BE2c, number 4488 of C Flight, No. 14 Sq. RFC, with Capt. Henderson at the Wadi Hamd Advanced Landing Ground in the Hijaz. (Thomas Henderson Album, courtesy of Cross & Cockade International)

Idrisid artillerymen being trained by British gunners, probably from the 2/1st Devonshire Battery at Aden. After Sayyid Muhammad al-Idrisi allied himself with the British Imperial government of India on 1 April 1915, his followers tied down the Ottoman Army's 21st (Asir) Division for the rest of the First World War. (Private collection)

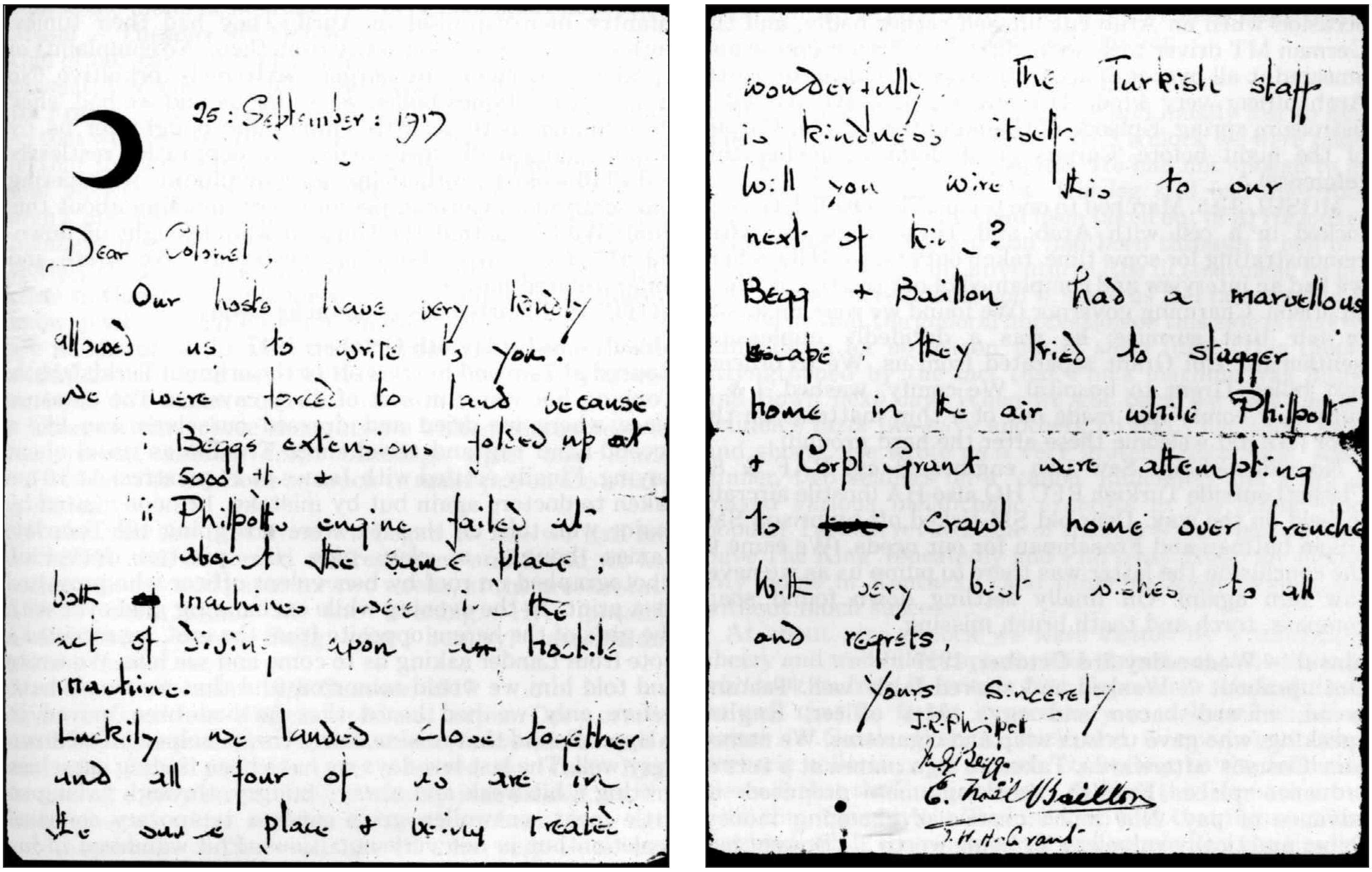


The Ottoman Halberstadt D.V scout flown by German pilot Lt. Schüz, which was damaged in a collision with a BE2c of No. 30 Sq. RFC over central Iraq on 3 April 1917. Perhaps remarkably, both machines landed safely and were repaired. (Hava Kuvvetleri Müzesi, Istanbul)

Ottoman records show that one of the captured British Martinsyde S.1 Scouts was attached to the Mosul Aircraft Park in 1917 and 1918, but could not be fully repaired and so was not flown again. It was probably ex-RFC 4244. (IFC6/MH6)

course, drawn into a resulting, low-key conflict. Apart from the importance of Aden itself, the Ottomans were determined to hold onto Yemen in the knowledge that its loss could stimulate anti-Ottoman risings elsewhere in the Arabian Peninsula. In the event the Arab Revolt broke out anyway, but in the meantime the senior Ottoman officer in Yemen was a redoubtable Circassian named Ali Sa'id Pasha. With just the 7th Army Corps under his command, consisting largely of Syrian Arab soldiers, he not only defended Yemen but advanced into British territory and confined his enemies to a tiny enclave around Aden.

On the other side of the frontier the main weapon used by the British in defence of the Aden area was at first money, which was given to local tribal leaders to cement their loyalty to the British. However, this failed to contain or to stop the Ottoman invasion in 1915. Such an unexpected imperial setback was attributed to incompetence on the part of the Aden authorities, so the "resident" – in effect the British governor – was dismissed and replaced by General Younghusband who hurriedly arrived from Egypt on 16 July 1916. Younghusband, however, refused to undertake a potentially expensive counter-offensive merely to restore British prestige. Regarding the whole affair as an insignificant side-show, he instead only allowed his troops to make a limited attack which



25 : September : 1917

Dear Colonel,

Our hosts have very kindly allowed us to write to you!

We were forced to land because

i Beggs extensions folded up at 5000 ft. +

ii Philpotts engine failed at about the same place;

both machines were in the act of diving upon our hostile machine.

Luckily we landed close together and all four of us are in the same place + being treated wonderfully. The Turkish staff is kindness itself.

Will you wire this to our next of kin?

Begg + Baillon had a marvellous escape: they tried to stagger home in the air while Philpott + Corpl. Grant were attempting to crawl home over trenches

With very best wishes to all and regrets,

Yours Sincerely

J.R. Philpot

Begg

E. Noël Baillon

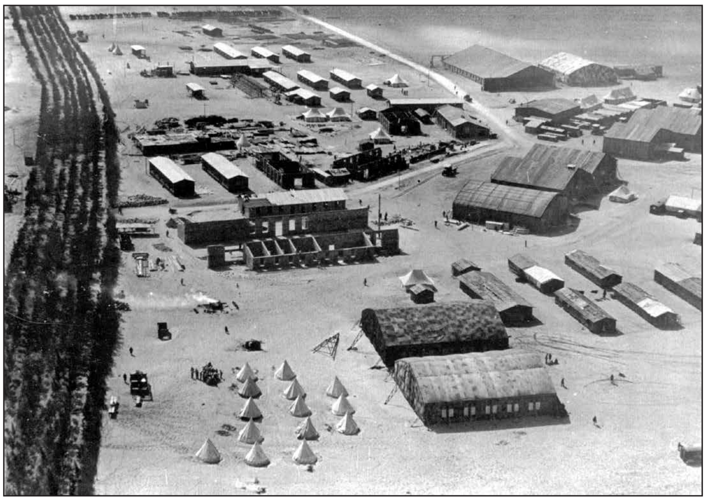
J.H.H. Grant

The letter of reassurance written by Philpott, Begg, Baillon and Grant of the British RFC to their squadron commander after being forced to land in enemy territory and being taken prisoner on the Mesopotamian front. Dated 25 September 1917, it was delivered through the International Red Cross, in this case Red Crescent.

Wing ribs for Albatros C.I or C.III aircraft being manufactured in the carpentry shop of the Ottoman aircraft park established outside Baghdad in 1916. A complete aircraft called Baghdad No.1 would be constructed here later that year, which has been described as resembling a British BE2 but using many parts from Albatros C.IIIs and handling like an Albatros. (Courtesy of O. Nikolajsen)

retook just enough territory to make Aden town and its vital port safe from enemy artillery fire.

The tribesmen of the Upper Yafa', who had traditionally fought as mercenaries for the Sultan of Lahij, refused to help the British in Aden and on 5 July 1915 Lahij itself fell to Ali Sa'id Pasha. It would remain in Ottoman hands until after the Armistice which ended the Great War, despite the outbreak of the Arab Revolt in the Hijaz in 1916 which cut the 7th Corps off from the rest of the Ottoman Army. It was not an auspicious start to the hurriedly formed Aden Field Force which held Aden and thereafter remained almost entirely on the defensive. It would, however, be supported by the Royal Navy and occasionally by one or two British aeroplanes. Meanwhile, British held territory also included the Barim (Perim) and Kamaran Islands.

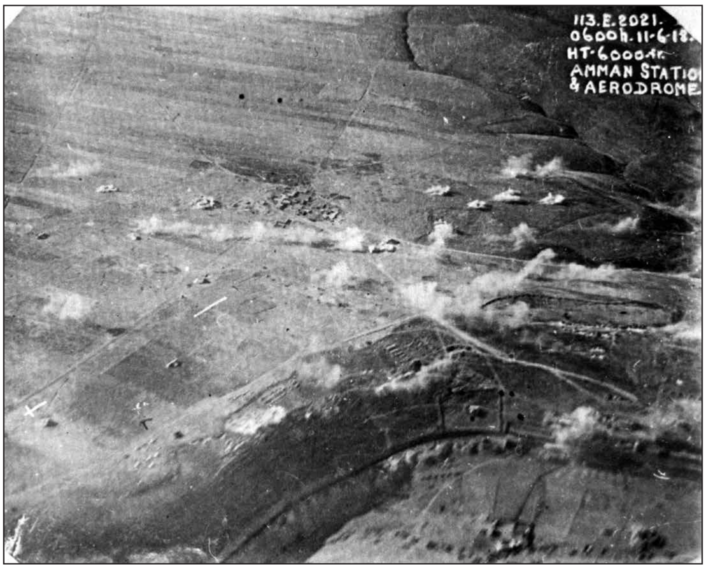


Ismailiya aerodrome on 27 February 1918, photographed by 2nd Lt. A.E. Fulton of No. 57 Training Squadron. (via J. Mitchell, courtesy of Cross & Cockade International)

In March 1915, an RFC depot was established in Mumbai (then Bombay) and Capt. Philip Broke Smith was appointed Assistant Director of Aviation for the Indian Army. By April, Broke Smith, Captain Hugh Lambert Reilly and First Lt. W.R. Wills were on their way to Mesopotamia with 10 mechanics. In fact the British Viceroy of India, Lord Charles Hardinge, had wanted a separate Indian Flying Corps to be formed but the RFC wanted full control, not only in Mesopotamia but also in India itself. The Viceroy finally and reluctantly agreed to this on 22 August 1915.

Early in 1916, Brigadier-General Price decided that a show of force would persuade some still undecided local tribes to remain loyal

The officers of No. 113 Sq. RFC, including Capt. Gabriel George Coury VC who was born in England of Lebanese parents. They are in front of one of their unit's RE8s, photographed either in Egypt or in Palestine. Formed in Egypt at the start of August 1917, No. 113 started artillery spotting and reconnaissance sorties over Palestine the following month, and continued these duties until the end of the war. Perhaps rather unfortunately, it came to be known as the Crusader Squadron and adopted the multiple crosses of the medieval Kingdom of Jerusalem as its insignia. (Private collection)



Amman aerodrome being bombed by No. 113 Sq. RFC on 11 June 1918. The photograph was taken from a height of 6,000 feet (1,829 metres). By this time the Ottoman High Command on the Syrian front had decided to concentrate its remaining air strength in Amman, mostly consisting of AEG C.IVs, one of which is visible on the airfield. (Private collection)

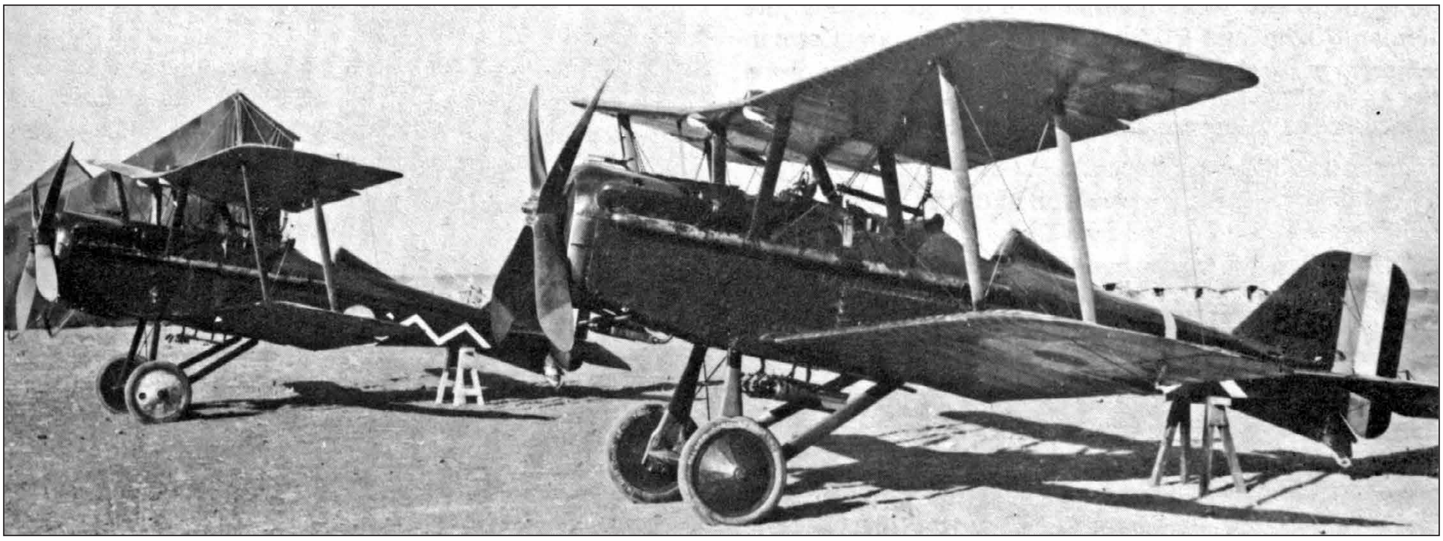
to the British. The Ottoman commander in Yemen was also trying to win them over. Price believed that the most economical way of impressing the tribesmen was to use aeroplanes. Indeed, Brigadier-General Price maintained that the appearance of aeroplanes could go a long way towards removing the threat to Aden. So in February, he persuaded the British military command in Egypt to send the seaplane carrier *Raven II*. She made her way down the Red Sea in late March 1916 with one two-seater Short and five single-seater Sopwith Schneider seaplanes on board. These machines were originally from the *Ben-my-Cree*, which was currently undergoing a refit in Port Said. As soon as the *Raven II* stopped near Barim Island, the disassembled seaplanes made ready for flight. The ship then entered Aden harbour under cover of darkness on 30 March so that Ottoman observers could not see that she had aeroplanes on board.

Flight Commander C.H.K. Edmonds was now in charge of the six machines on *Raven II* and after a conference with Brigadier-General Price it was agreed that an initial reconnaissance sortie be flown on 1 April, to be followed by a three day campaign using 20lb. Cooper bombs against Ottoman encampments in the vicinity of Waht, Fiyush and Subar. Pamphlets were also scattered in areas occupied by tribesmen who supported the enemy, urging them to abandon the Ottoman cause. It was not particularly effective, and as the Royal Navy urgently needed the *Raven II* elsewhere, this campaign was not followed up. The seaplane carried sailed back up the Red Sea with its aeroplanes to Port Said. The opinions expressed by the Amir of Dala were probably shared by others. He had asked for British help against the Ottoman advance from Yemen but when this was not forthcoming, he decided to support the Ottoman cause, stating that; "The boots of the Turks are stronger than the aeroplanes of the British".

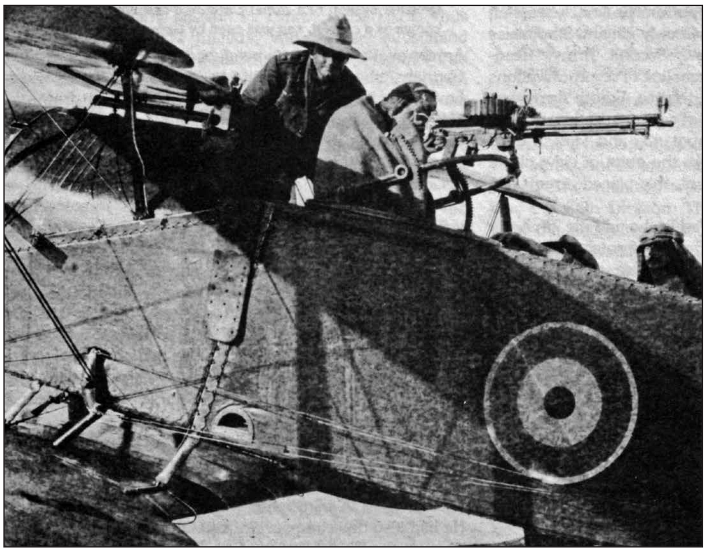
Throughout 1916, the Aden Field Force under Brigadier-General Price usually consisted of six infantry battalions, two squadrons of cavalry, the locally recruited Aden Troops, one company of engineers and an assortment of archaic artillery. There was also a kite balloon for observation in 1916, to which some old fashioned aircraft were subsequently added. RNAS seaplanes also cooperated with British and Indian Army units in the Aden Protectorate from April. In fact, RNAS Short seaplanes returned in June, this time aboard the *Ben-my-Cree* which approached Aden at daybreak on 7 June 1916. Seaplanes were immediately sent to look at the area around Lahij, discovering several enemy camps north of the town. The aircrews also reported a sizeable depot of enemy equipment in the Ottoman camp outside Subar. The same sort of bombing campaign which had been carried out early in April 1916 was now repeated between 7-12 June of the same year. Such offensive sorties were carried out at relatively low level in the morning and again in the evening every day, but using heavier bombs than before. The raids by *Ben-my-Cree*'s aeroplanes were initially opposed only by rifle and machinegun fire. Later, the defenders mounted a few of their light artillery pieces as anti-aircraft guns, though not always choosing the most suitable locations. According to British reports one was placed on the roof of the Sultan's palace at Lahij. This latter could not take the gun's recoil and as a result the roof collapsed when the gun was fired.

According to the Aden Troop War Diary, one of the reconnaissance missions flown by British seaplanes on 10 June followed a localized Ottoman offensive against Imad, from which hundreds of men had been recruited by the British as the Imad Levy in December 1915. The auxiliary unit formed by these men subsequently evolved into the Arab Levy. On the final day of the June bombing campaign a primitive incendiary bomb was successfully dropped on the enemy depot near Subar. That same afternoon *Ben-my-Cree* left Aden. Around dawn the following day, 13 June she was lying off Barim Island and from here the seaplanes bombed Ottoman encampments at Jabal Malu and Jabal Akrabi. A Sopwith seaplane also spotted for *Ben-my-Cree*'s own few guns, which bombarded the same two targets.

Because Aden was the responsibility of the British Imperial Government of India, the provision of air support for the "front" around Aden was shared between the Indian government and the Royal Navy. So this particular side-show also forms part of the earliest history of the Indian, and by extension the Pakistani and Bangladeshi, Air Forces. Captain Seaton Dunham Massy of 29th

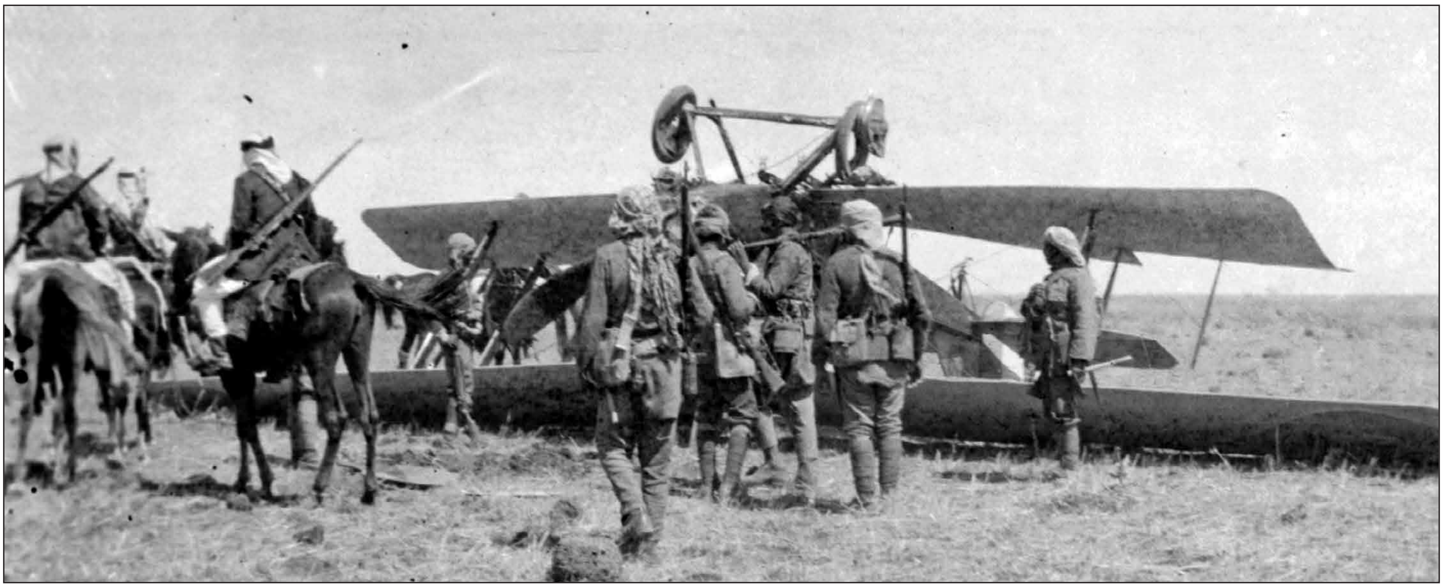


No. 111 Squadron RFC received SE5a scouts in October 1917 in Palestine. Two are photographed here during 1918. The closest machine has a load of bombs on the racks within its undercarriage. This unit also chose the Cross of Jerusalem as its badge, a fact not lost upon Palestinians and other Arabs who regard the British "liberation" of Jerusalem from the Ottoman Turks as a return of the feared Salibiya or Crusaders. (Bruce Robertson Collection)

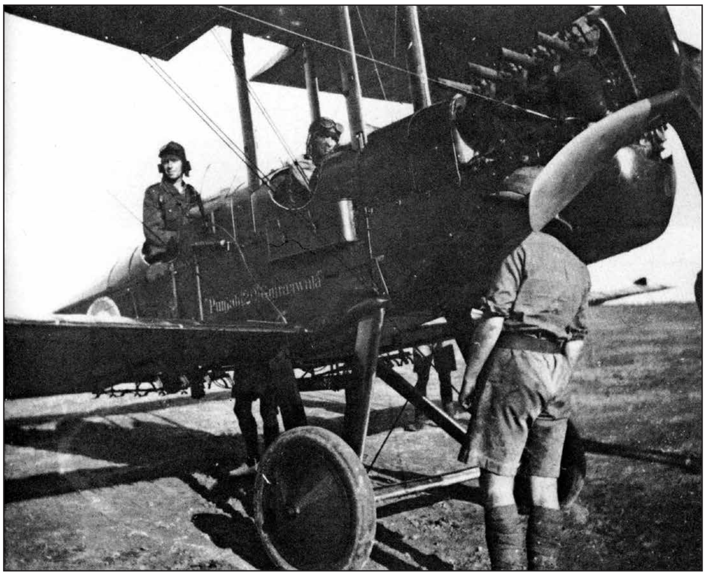


An Arab tribesman pretending to fire the observer's gun on a Bristol F2B Fighter of X Flight at Aqaba, with Lt. Col. P.C. Joyce in the pilot's cockpit. The photograph was probably taken early in 1918. (Private collection)

Punjabis had been the first Indian Army officer to qualify as a pilot in May 1911. On 1 February the following year he was appointed to command the newly created Indian Central Flying School at Sitapur. By April 1914 this had three aeroplanes on charge, with five more on order. The trouble which had already flared up on India's North-West Frontier Region and neighbouring Afghanistan, partially stirred up by German and Ottoman agents, does not form part of the subject matter of this book. However, many of the men and aeroplanes that took part in actions to suppress these "troubles" also served in and around Aden. No. 31 Squadron RFC was the first to be allocated to India, having arrived on Boxing Day 1915. It then operated over the North-West Frontier from its airfield at Peshawar throughout 1916. In January 1917 the RFC's Middle Eastern headquarters asked the British War Office to clarify the RFC's role in India, and to supply No. 31 Squadron with extra Flights. One of the latter was originally intended for service in Aden, and drew some personnel from units in Egypt. In the event, other priorities intervened and an RFC Flight was not deployed to Aden until November 1917.



On 17 September 1918 the BE12 of Lt. Junor was brought down near Muzirib, in what is now the south-western corner of Syria, by German scouts of the recently arrived Jasta 1 (or 2 according to other sources) based at Dara'a. Here it is being inspected by infantry and cavalry of the regular Sharifian Army, better known as the Northern Army of the Arab Revolt. Junor was one of those RFC, now RAF, pilots who worked closely with T.E. Lawrence "of Arabia". His fight and crash landing was described in colourful detail by Lawrence in his book *Seven Pillars of Wisdom*. (Martyrs Memorial Museum, Amman)



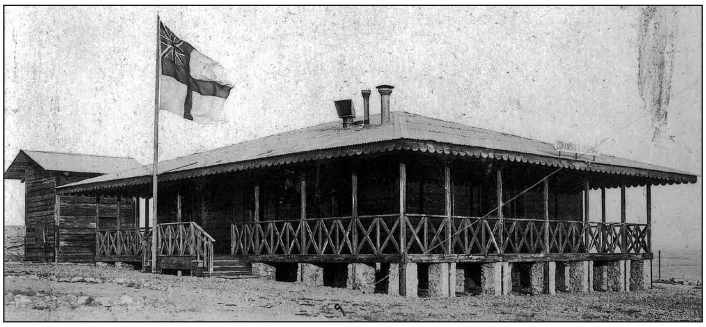
The Aden Flight of No. 14 Sq. RAF included at least two presentation aircraft, indicating that the cost of their construction and purchase had been born by a wealthy organization or individual. This BE2e, serial number A3104 named "Punjab (20) Gujranwala", was the twentieth machine purchased by funds from the Punjab region (which is now divided between India and Pakistan), and more specifically by the district of Gujranwala (now in Pakistan). (Private collection, courtesy of Cross & Cockade International)

Of the three BE2c aeroplanes allocated to Aden back on 11 March, two had already been flown by No. 14 Squadron in Egypt, where one of them (serial number 4356) is known to have crashed at least twice. All were then sent to India just over a month later. Six marginally more advanced BE2e aeroplanes were then sent to the Aden Flight of No. 114 Squadron, one of them (serial number B3675) spending some of its time in Aden as part of the "Submarine Flight" of No. 269 Squadron late in 1918. Two of the others were "Presentation" machines with the names of those who paid for them being written on their fuselages; A3094 being "Overseas Club New York Britons No.3", and A3104 being "Punjab No. 20 'Gujranwala'". The latter had already served in East Africa and would be damaged during a take-off accident on 23 April 1918 while flown by Lieutenant L.J. Mann & Lieutenant Sacre. BE2e serial number A1806 was wrecked on 7 August 1918 when Captain C.E. Sherwin was injured. After the war the survivors would be sent to India in August 1919.

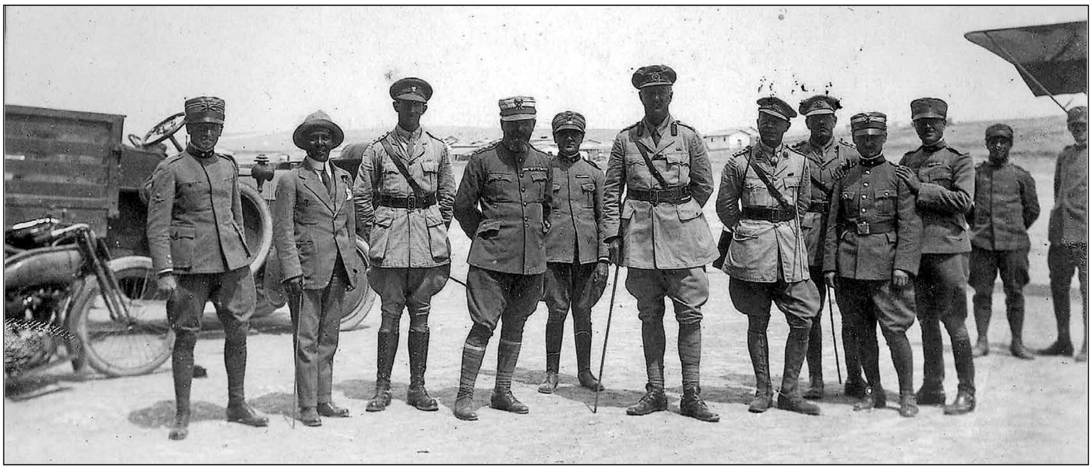
In December 1916, No. 13 Kite Balloon Section had also arrived in Aden to support action against the surrounding Ottoman Army and their local allies. Finally, in June 1917, the Admiralty requested that the RFC, which was of course part of the British Army, replace the Navy's RNAS kite-balloons. No. 57 Kite Balloon Section was earmarked for this duty and was supposed to travel from England to Aden via Egypt but, following various delays in Egypt, did not reach Aden until 29 November 1917. Also in November, the overstretched British Indian government decided that it could no longer continue to supply troops to defend Aden and therefore handed over military responsibility to the War Office and Foreign Office in London. However, the question of who would continue to cover the cost of this "front" remained undecided – should it be London or Delhi?

Earlier, on 8 September 1917, the British War Office announced that a half-flight of aeroplanes had been set aside for Aden, initially consisting of four antiquated Henri Farman F.27s from 114 Squadron. Major David Edmund Stodart, a highly experienced officer, would also take command of the entire RFC presence, including the aeroplanes and No. 57 Kite Balloon Section. Eventually seven officers under Captain C.E. Sherwin and thirty other ranks left India for Aden on 3 November 1917, five other ranks also having set off from Egypt three weeks earlier. So it was that in December 1917, the first land-based British aircraft arrived in the Aden enclave. Their first action was to support men of the British Indian 7th Rajput Regiment who were fighting a fierce rear-guard action through difficult undergrowth at Darab. Here the advancing Ottoman troops were kept at bay by British artillery, targeted by aeroplanes of the RFC. These aircraft similarly bombed nearby enemy encampments. The year 1917 also saw the establishment of an airfield outside Aden, later to be known as RAF Khormaksar (Khur Maksar). However, this would not have a resident squadron until the arrival of No. 8 Squadron RAF in 1925.

A very small number of British aircraft continued to be used in and around Aden in 1918, though not without loss. On 23 January 1918 a Henri Farman F.27 crashed near Wadi Kabir, having been brought down by rifle fire. It was one of the six old French built two-seater pusher aeroplanes used by the Aden Flight of No. 114 Squadron, having been allocated to this unit in November 1917. Two of these Henri Farman F.27s (serial numbers A395 and A401) had early been used by No. 31 Squadron in India. A401 was one of



The British even had their own Mission Headquarters at Tubruq aerodrome in 1918. Above it flew the "White Ensign", indicating that this was primarily a Royal Navy responsibility. (Museo Storico Aeronautica Militare, Vigna di Valle)



Italian and British officers at the Italian aerodrome outside Tubruq in eastern Libya on 20 May 1918. Cooperation between British and Italian air forces against the Libyan resistance or "dissidents" is one of the least known aspects of the air conflict in the Arab world during the First World War. (Museo Storico Aeronautica Militare, Vigna di Valle) the machines involved in the dramatic events of 23 January 1918 when it tried to assist the Henri Farman F.27 (A404) which had been shot down. The crew of the latter, Lieutenant J.B. Thomas and Sqt C.W. Hartley, were killed when their machine reportedly crashed "in flames". However, sufficient of the damaged Farman survived to be carried off, according to some sources, and shown throughout Yemen to raise Ottoman prestige and boost morale. Henri Farman A401 was also hit and its pilot, Second Lieutenant J.S. Owden was wounded. His observer, Second Lieutenant L.J. Mann was unhurt, even when the Henri Farman wrote off its undercarriage on landing. The Ottoman commander, Ali Sa'id Pasha, then offered to return the bodies of the crew of A404.

From 22 June 1918, Lieutenant Colonel J.E. Tennant would have overall responsibility for what was now the RAF detachment in Aden. He was another experienced man having previously been shot down while flying a DH4 bomber in Iraq, captured by the enemy then rescued by British armoured cars. By 1918 the British authorities in Aden had raised a body of troops called the First Yemen Infantry but this was promptly disbanded when peace came. Meanwhile back in India, the tiny RFC presence had been busy over the unforgiving mountainous terrain of the North-West Frontier and Baluchistan during 1918. By the end of the Great War there were also twelve British and Indian other ranks training as observers in India while at Lahore practice army co-operation flights were flown in now outdated Henri Farmans which had returned from Aden.

2

THE EGYPTIAN MILITARY AND AIR POWER

The Egyptian Army played a more significant role during the First World War than is generally recognised, and during the course of its – admittedly limited – operations its officers and men had both direct and indirect experience of the use of air power. However, Egypt had no established aristocratic military tradition like those of Britain or France and consequently its officer corps had only weak links with the country's civilian or governing elites. This would remain the case until the Egyptian revolution or coup of 1952, after which the relationship between Egypt's governing and military elites changed entirely. Few of the country's leading families had well established traditions of military service and many of those that did have them, were of Turkish or Albanian Ottoman rather than indigenous Egyptian origin. Furthermore, many younger Egyptian officers were already becoming alienated from the Egyptian ruling family and ruling class which were increasingly seen as stooges of the occupying British.

Criticisms which were directed against the British occupiers by later generations of senior Egyptian officers like Air Commodore Ali Muhammad Labib were often exaggerated, especially where the supposedly hostile intentions of British authorities were concerned. Nevertheless, the fact remained that high command was given to British officers, and most lower commands to officers of Turkish or Albanian origin. Furthermore, the Turkish language remained in use for issuing orders and communication until the 1930s. Wartime British propaganda also reflected the paternalistic and undoubtedly "imperialist" attitudes of the time, with the press referring to the Egyptian military as "our Egyptian Army" although Egypt never formed part of British Empire. In fact, the Egyptian armed forces had theoretically remained part of the Ottoman Army until the Ottoman Empire entered war as Germany's ally, whereupon the British declared Egypt to be a separate sultanate with its own separate army. Even before this happened, the question of whether or not "enemy" merchant ships could claim maritime asylum in a theoretically international, and thus presumably neutral, Suez Canal remained undecided for a while. Eventually the Egyptian government ordered them to leave Egyptian waters. Egyptian ships then escorted these vessels to the edge of the country's three mile wide territorial waters, where Allied warships seized them as prizes.

At the start of the First World War in August 1914, the size of the Egyptian Army was still limited to around 15,000 officers and other ranks, theoretically all volunteers, equipped with old fashioned though not obsolete weaponry. There were two squadrons of cavalry, three companies of mounted infantry, six batteries of field and mountain artillery, just one machinegun battery equipped with Maxims, and three companies of garrison or heavier artillery. The infantry, of course, formed the bulk of the Army with eight Egyptian, seven Sudanese, one Arab (desert Bedouin) and one Equatorial (southern Sudanese) battalions. Of these forces, only one field battery, one garrison artillery company and three infantry battalions were based in Egypt itself, along with the Army's training depots. The rest were stationed in the Sudan where they had proved very effective in maintaining internal security and patrolling the ill-defined, sometime undefined, frontiers of that huge territory. In addition, the Egyptian Army had its own support units, including medical and engineering formations. The Egyptian Camel Corps was in many ways a separate and elite force, initially composed of Sudanese men under Egyptian and British officers.

The Ottoman entry into the Great War led to a determined drive by both the British and Egyptian authorities to increase the size of the Egyptian Army, which would reach around 22,000 men by the end of 1915. These men included both Egyptians and Sudanese, and although the majority were still stationed in the Sudan, the Egyptian Army was able to contribute fully trained artillery batteries to the defence of the Suez Canal when the Ottoman Fourth Army suddenly attacked the waterway. These troops proved entirely reliable. However, this was not the case with elements of the Egyptian Coastguard which, though a camel-mounted and well-armed military force containing non-Egyptian mercenaries, was not under Egyptian Army command. Its role had been to stop smuggling over the desert frontiers and coasts.

By the end of 1914 there were also much larger numbers of troops from the British Empire in the country; some 70,000 men including British, Australian, New Zealander and above all Indian soldiers. These were expected to defend Egypt and the Canal because the British government made no secret of the fact that it did not entirely trust the Egyptian Army. Indeed, the British government went so far as to say that the Egyptians were not needed, at least not in the front line. This fear was not really surprisingly, although it proved to be largely unfounded. When the Great War actually started, the Khedive of Egypt was in the Ottoman capital of Constantinople, remaining there even after the Ottoman Empire allied itself with Germany and Austria-Hungary. Worse still, the British intelligence service in Cairo believed that the Khedive had recruited a secret group of ultra-loyal Egyptian Army officers who would supposedly lead a revolt and slaughter the small British force which occupied the country at the start of the war, perhaps in conjunction with an enemy naval landing. The officers supposedly concerned were arrested and, on British insistence, the Khedive was replaced by a more amenable member of the Egyptian ruling family who was himself soon raised to the rank of Sultan.

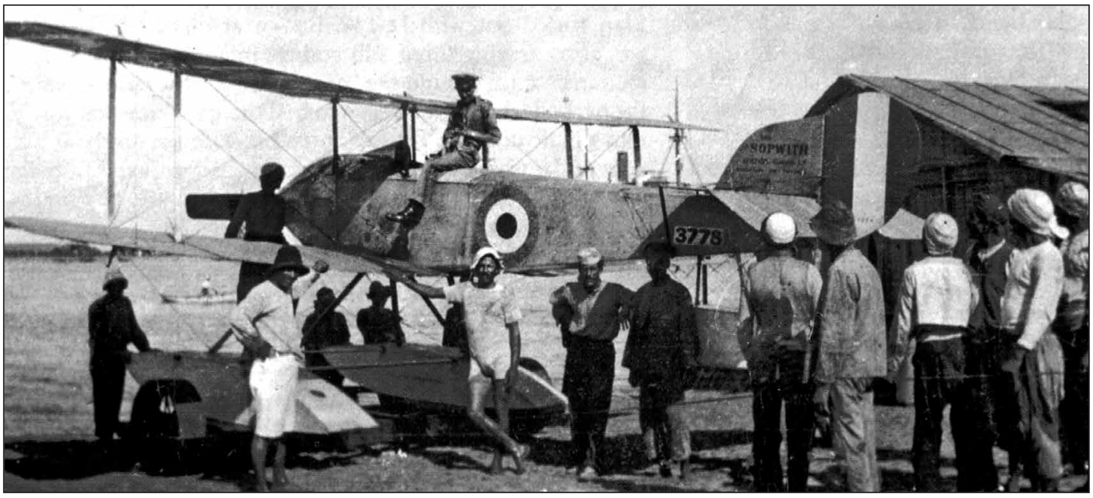
Captain (Yüzbaşı) Iskander Abdo Agami of the Egyptian Army's Royal Medical Corps in his black winter full dress, unlike his summer dress uniform which was white. This photograph was taken around 1915. (George Agami family collection)

Within days of the Ottoman entry into the First World War, martial law was declared across Egypt. In November 1914 the senior British commander in the country, Lieutenant-General Sir John Maxwell, then issued the unnecessary and foolish declaration that Britain would assume sole responsibility for the defence of Egyptian territory. Thus, at a stroke, he made the Egyptian Army superfluous while also humiliating not only the Egyptian Army but also the country's increasingly patriotic educated middle and upper classes.

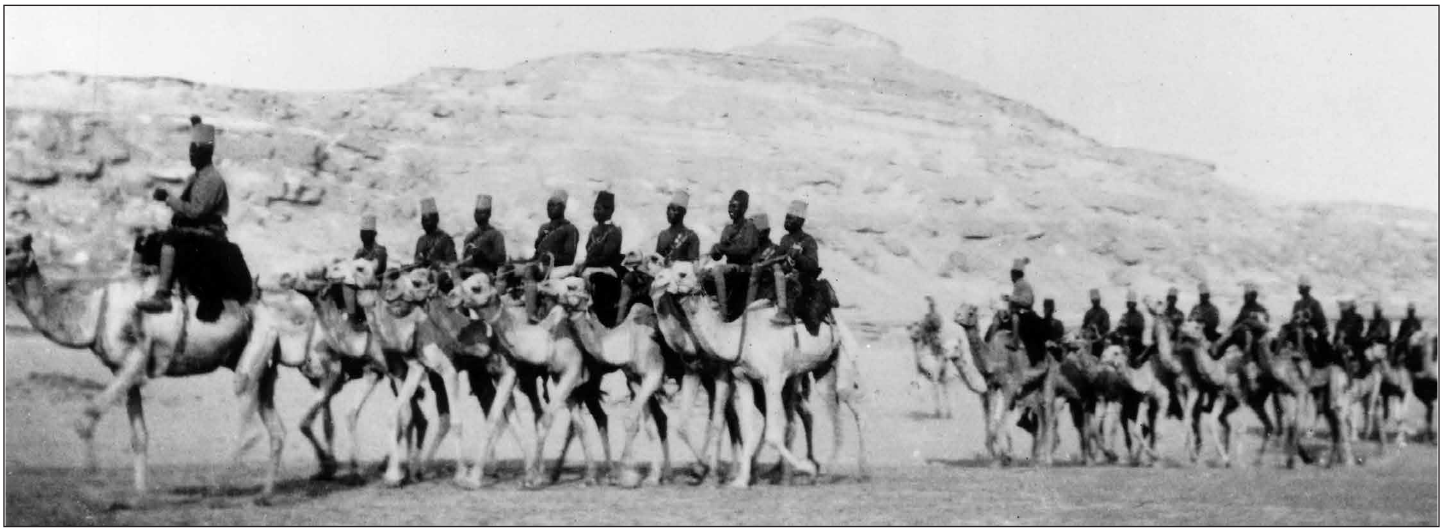
It did not take long for Maxwell and the rest of the British establishment in Cairo and in London to realise that they did need the Egyptians after all. In fact, only a few days after Lieutenant-General Maxwell's statement, some Egyptian artillery batteries were sent to help defend the Canal. The Egyptian Camel Corps had already been sent there at the end of August 1914, but were told not to go further than the eastern bank of the waterway. The British also ordered that the Sinai Peninsula be largely evacuated apart from small Egyptian detachments at al-Tur and Abu Zanima. In December 1914 "enemy Bedouin" tribesmen crossed the frontier from Ottoman-ruled Palestine. In response, a detachment of Egyptian Coastguards was sent to destroy the water-wells at Nakhl, to deny them to the enemy, while an Egyptian Army detachment of mule-mounted light artillery was sent to the Canal. The first armed clash came when a patrol of twenty troopers of the Bikaner Camel Corps was attacked at Bir al-Nuss a little over 30 kilometres east of al-Qantara by around two hundred "enemy Bedouin". After a fierce skirmish the Bikaner camel troopers fought their way back, although half of them were killed or wounded. The Bikaner Camel Corps was a largely Hindu Indian force which had, in effect, been loaned to the Egyptian Army by the Maharaja of Bikaner in Rajastan.

By January 1915 some sort of defensive structure was in place to protect the Suez Canal from any Ottoman attack. It was backed up by a general reserve at Mu'askar Camp which included a section of Egyptian Army engineers and a battery of Egyptian mountain artillery. In the middle of that month Ottoman forces took control of the village and palm-groves of al-Arish, the main settlement in Sinai. By 27 January, an Ottoman army commanded by Çamal Pasha was within 40 kilometres of the Canal and for the first time clashed with defending forces. The Ottoman force, which reached the Canal without any difficulty whatsoever, eventually consisted of 12 largely Syrian Arab battalions from the Ottoman Fourth Army, 9 artillery batteries, 2 companies from the (largely Arab) Ottoman Camel Corps under Sami Bey, and approximately 1,500 Arab irregular volunteers making a total of between 12,000 and 15,000 men,

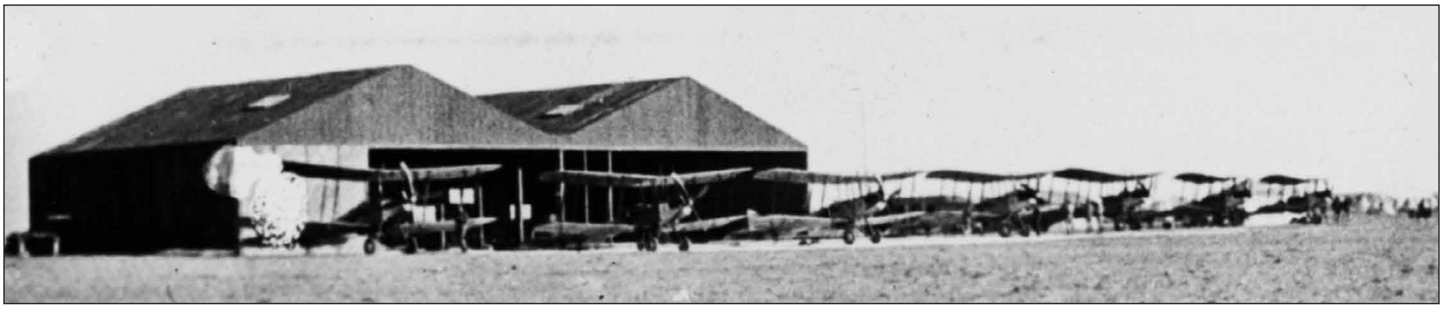
The British military command in Egypt considered that its own troops were neither trained, nor organized or equipped for desert warfare. Lieutenant-General Maxwell therefore decided not to try to defend Sinai, but to use the Suez Canal as his main line of defence. Here his troops would have secure communications with the Egyptian heartland and, most importantly, have plenty of drinking water for men and animals. Only later would his defences be pushed to the east of the Canal where pipelines had to be laid to supply them with drinking water. Facing the Ottomans were not only the British, Imperial and Egyptian troops, but also five warships and torpedo boats from the



A Sopwith Schneider, serial number 3778, of the British Royal Naval Air Service (RNAS) at Port Said in 1916. Around it are some of the Egyptian dock workers without whom RNAS operations would have been virtually impossible. (Private collection, courtesy of Cross & Cockade International)



A patrol of the Egyptian Coastguard Camel Corps in the Western Desert just before the outbreak of the First World War. Largely recruited in the Anglo-Egyptian Sudan, these were regarded as something on an elite force. (Egyptian Geographical Society archive)



BE2c aeroplanes of the RFC lined up outside wooden hangers in Egypt at some time during 1916. They are probably from No. 14 Squadron at Ismailiya, though the presence of so many machines at a time when the Flights of No. 14 were scattered across a very wide area might suggest that they are in fact from recently arrived No. 17 Squadron at Suez. (Egyptian Air Force Museum)

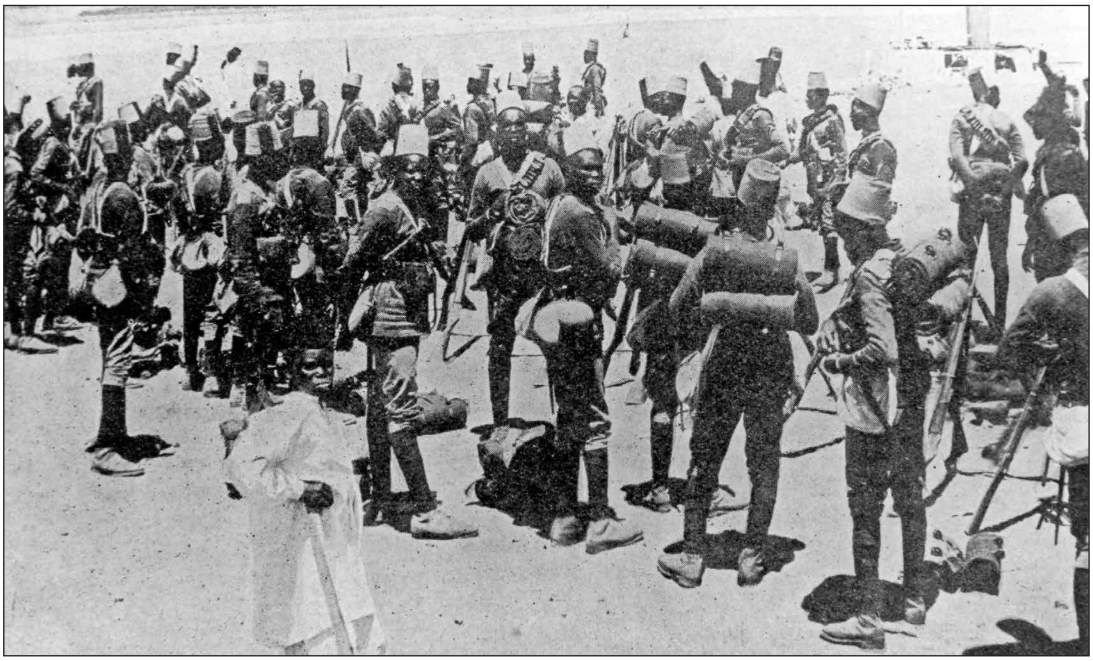
British and French navies. These provided what proved to be very effective heavy artillery support. Also present was the little Egyptian armed tug *Mansourah* which mounted a single light gun.

After sunset on 2 February 1915, the Ottomans attacked in three columns, focussing upon the 15 kilometre wide gap between the Great Bitter Lake and Lake Timsah. Amongst those facing this assault was the 5th Battery of Egyptian Artillery with four mountain guns and two Maxim machineguns. They shared this part of the front with Indian troops from Punjabi, Rajput and Gurkha regiments of 22nd Indian Brigade, plus 19th Lancashire Battery of the Royal Field Artillery. The Ottoman commander had probably chosen to attack this part of the front because many of the British Indian Army troops were Muslims who, like the Egyptian artillerymen, were mistakenly expected to refuse to fight if not to turn upon the British. The British also feared something of the kind, which resulted in a paradoxical situation in which urgently needed British troops were held back in Cairo in case of an uprising, while Egyptian troops faced the enemy along the Suez Canal.

In the event a handful of Indians did desert, but the 5th Battery of Egyptian Artillery fought so well that it would be mentioned in Lieutenant-General Maxwell's dispatches after the battle. Initially, the Ottoman commander's choice of moment to attack was good, because strong winds and a suffocating dust-storm had grounded Allied aeroplanes. Throughout 2 February and through dusk the defenders remained on high alert, aware that even in the dust and gathering darkness, sound might still warn them of an enemy attack. As evening fell the sandstorm abated but the moon was still hidden by cloud and the Ottoman assault troops reached the east, or Sinai, bank of the Suez Canal without being discovered.

Then, as the first metal pontoon of their planned bridge of boats was pushed into the water the clouds parted and in the moonlight the Egyptian artillerymen could see the enemy right in front of their position. Mulazim Awal (First Lieutenant) Ahmad Hilmy was in command of the closest Egyptian position and he promptly ordered his mountain guns and machineguns to open fire at relatively short range. Most of the enemy's boats were sunk and the Ottoman troops were forced back from the Canal. Three boats manned by somewhat dazed Syrian Arab troops did reach the western shore, but these men were overwhelmed in a bayonet charge by the 22nd Indian Brigade. The struggle was far from being one-sided however, and Mulazim Awal Ahmad Hilmy was killed. He was decorated posthumously, along with some other officers and men, while the Egyptian Artillery battery was congratulated by the new Egyptian Sultan.

Elsewhere other poorly coordinated Ottoman attacks were similarly defeated and as the enemy withdrew they were shelled by Allied warships moored in the Suez Canal Lakes. This was followed by several smaller clashes between the two sides. For example, on 12 February half a battalion (200 men) from 2/7th Gurkhas and two hundred riflemen from 2nd (Egyptian) Battalion of the Egyptian Army under Bimbashi (Major) Pott were sent to drive off Arab irregulars of the Ottoman Army under German officers who were threatening al-Tur on the Sinai coast of the Gulf of Suez. The Egyptians and Indians attacked at dawn on the 13th, killing 60 of the enemy and capturing 102. This success was followed by another on 28 April, when a mixed Egyptian force advanced against the encampment of an estimated two hundred Ottoman troops. However, the latter withdrew under cover of night. In fact, Çamal Pasha commanded his army to withdraw from western Sinai, leaving



Egyptian Sudanese soldiers of the Egyptian Army, probably from the 13th Sudanese Infantry under Ahmad Fahmi, during the Darfur Campaign against Sultan Ali Dinar in the spring of 1916. They are armed with archaic Martini-Henry rifles. (Egyptian Army Museum)

just 400 or so men in the peninsula where their presence obliged the British under Sir John Maxwell had to maintain a significant force in the Canal area.

The Ottoman Sultan's call for a jihad against his infidel enemies had proved a flop. The overall Egyptian hostility to the Ottoman invasion, which was seen as potentially replacing one occupation with another, had both pleased and rather surprised the British. There had been no pro-Ottoman sabotage and the British were now confident enough to permit the recall of Egyptian Army reservists. They also encouraged a much larger scale – and soon forcible – enlistment of fellahin peasantry into various Egyptian auxiliary corps.

The British military leadership in Egypt realised that the first Ottoman attack came close to success, which would have resulted in the closing of the strategically vital Suez Canal. They would take no further chances, and when Lord Kitchener "of Khartoum" took over command in Egypt he drew up a new defensive plan. Kitchener also seems to have agreed with many critics in Great Britain who complained that the Suez Canal was protecting British troops in Egypt rather than the Canal being protected by the troops. By December 1915 a new military plan envisaged three roughly parallel lines of defence, the first about 10,000 metres east of the Canal in Sinai, the second approximately midway between the first and the banks of the Canal itself, but far enough from the waterway to keep enemy artillery and observation at bay if the first line fell. A third line would serve as a final line of defence close to the eastern bank of the Canal and its Lakes, but also incorporating defensible bridgeheads.

The viability of Kitchener's system relied upon sufficient drinking water from the Sweet Water Canal which ran from Cairo to Ismailia. There would also have to be a doubling of the capacity of the existing railway from Zagazig in the Nile Delta to Ismailia, as well as a substantial expansion of the road system. Such work required a huge labour force, as did the construction of the defensive lines themselves. An answer was found in a massive expansion of the Egyptian Labour Corps (ELC) whose original formation in 1915 had largely been in response to the Gallipoli Campaign. In May of that year six battalions had been prepared for service in the Dardanelles, labouring there for four months under almost constant enemy bombardment and returning to Egypt with a reputation not only for hard work but also for patient endurance.

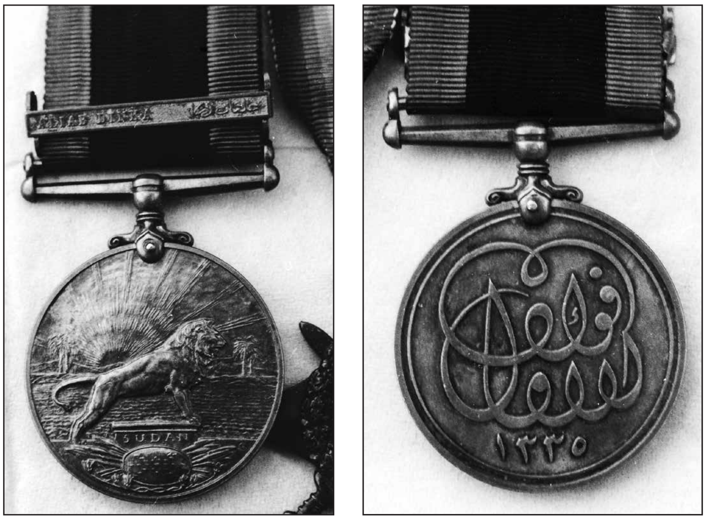
The Egyptian Labour Corps, or ELC, was a remarkable organisation, structured as a paramilitary force divided into companies, each of 600 men. Its administrative headquarters was in Alexandria while basic training was undertaken at Hadra Camp. The Camel Transport Corps (CTC) emerged out of the ELC and initially consisted of seventeen companies, each with around 2,000 baggage camels. Unlike the men of the Egyptian Army and Coastguard, the men of the Egyptian Labour Corps and Camel Transport Corps were drafted rather than being volunteers, and 23,000 of them would eventually serve outside Egypt.

The Egyptian Army may have been small but it could summon a substantial number of reservists, all of whom were called up, if medically fit and not already in government service, on 20 January 1916. These experienced ex-soldiers, especially the ex-NCOs, proved invaluable, supervising the fast-growing ELC labour gangs who were working for the British Army. Others were drafted into the Egyptian State Railways and eventually found themselves sent to Sinai and to the oases of the Western Desert.

Once the Ottoman threat to the Suez Canal was lifted, it was time for the Allies to recover Sinai. This was undertaken by British and Imperial forces, though the 2nd Egyptian Battalion also took part. Men with local knowledge and language were needed, not least because the Arab tribes of the Sinai Peninsula were generally sympathetic to the Ottoman Empire and would alert the enemy before British patrols or cutting out missions could arrive. Meanwhile the Egyptian Labour and Camel Transport Corps were shelled by enemy artillery and bombed by enemy aircraft just like the soldiers amongst whom they worked. Those building a new railway along the northern Sinai coast were a particular target for enemy raiders who attacked them by land and from the air. It took the labourers, who were overwhelmingly of rural fellah peasant origin, some time to get used to being bombed from the air. Even in early 1917 they tended to scatter widely when the bombs fell, "with a consequent appreciable delay in their work" as the British put it. For a while the British RFC even paused its own attacks on enemy rear areas in order to avoid German or Ottoman retribution aimed at the ELC.

Later, it would appear that the Egyptian Labour Corps men who had been working almost on the front line in southern Palestine learned to take enemy fire in their stride. On 1 November 1917 some of them were even sent behind the enemy lines. This was part of a ruse by Rear Admiral T. Jackson to make the enemy think the British intended to make a coastal landing near Dayr al-Ballah, behind the Ottoman right flank. Men of the ELC were, therefore, put ashore within sight of Ottoman forces from about 1630 hours

Captain (Yüzbaşı) Iskander Abdo Agami of the Royal Medical Corps in the Egyptian Army's khaki service uniform in 1915 or 1916. (George Agami family collection)



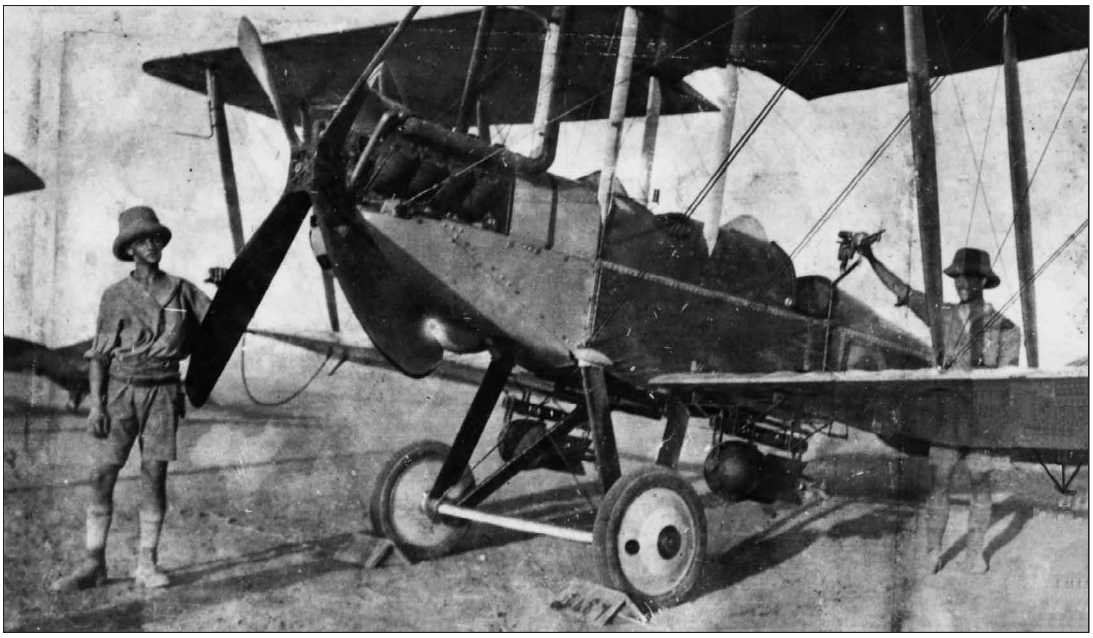
Iskander Abdo Agami's Sudan Medal, dated 1335 AH (equivalent to the year 1916 AD) with the Aliab Dinka clasp awarded for his additional service in the Sudan shortly after the end of the Great War: the front on the left; the back on the right. (George Agami collection, author's photograph)

onwards, but when it became too dark for the enemy to see what was happening, the Egyptians were re-embarked. Some RNAS seaplanes were also involved to give greater realism to this feint assault.

Another and very different threat to Egyptian territory was presented by the Sanussi. When the First World War broke out, Italian forces were still fighting a Sanussi-led resistance in eastern Libya, and when Italy entered the conflict as an ally of Britain, the Ottoman Empire and its German allies expected to use the Sanussi against their own foes. This is what actually happened in November 1915. The first significant Sanussi violation of Egyptian territory was by a force of around 5,000 on the night of 19-20 November. A few machineguns and a detachment of 10-pounder mountain guns, supported by camel transport and commanded by a senior Ottoman officer, was also directed towards the border town and small port of Sollum.

Facing them were a small number of Egyptian troops and coastguards, scattered between Sidi Barrani, Sollum, Siwa Oasis and along the Mediterranean coast. Of these, the largest number were at Sollum alongside a small detachment of Egyptian Army Garrison Artillery with two Krupp artillery batteries. They were under the command of a British officer, Colonel Cecil Snow of the Egyptian Army, Governor of the Western Desert and himself a British intelligence agent. Beneath Snow was a senior Egyptian officer who was considered a strong supporter of the British war effort.

In November 1915, the Egyptian artillerymen at Sollum were engaged by Senussi forces supported by the German submarine *U-35* which shelled two Egyptian coastguard gunboats in Sollum Bay. These were the *Abbas* which was sunk at her moorings and the *Nuhr al-Bahr* which was damaged. Colonel Snow therefore withdrew from Sollum to Marsa Matruh, leaving Muhammad Salih al-Harb in charge of the coast next to the Libyan frontier. Meanwhile, the fate of the Egyptian-Sudanese detachment in Sidi Barrani seemed to be ignored by British officers, which clearly undermined Egyptian morale. Then, in the face of superior strength, the Egyptian infantry were withdrawn from Sollum by sea while the Coast Guard Camel Corps and a small number of British RNAS armoured cars retreated overland. During their march, about one hundred and twenty men of the Coast Guard Camel Corps detachment under their commander Muhammad Salih al-Harb defected to the enemy. This again undermined British confidence in the Egyptian



A BE2c of the RFC carrying two substantial bombs beneath its wings, plus a gun to be operated by the pilot who sat in the rear cockpit. The machine is probably from No. 14 Squadron, based at Ismailiya in 1916. (Egyptian Air Force Museum)

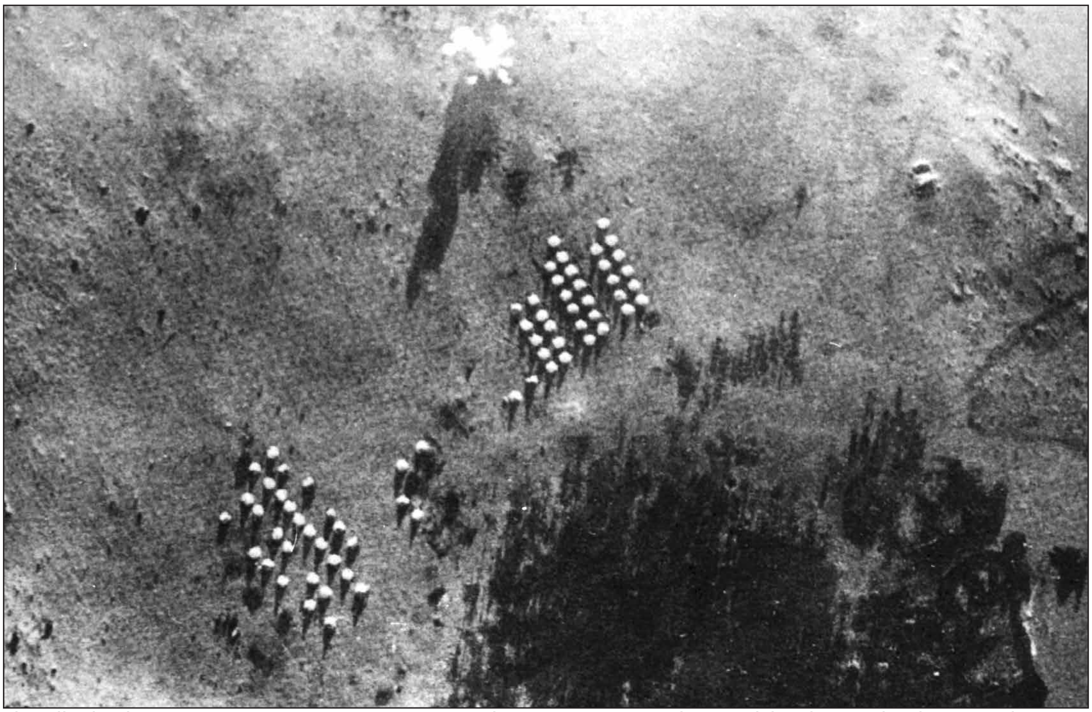
Two troopers from the Egyptian Battalion of the Egyptian Army's elite Camel Corps, with local guards at the gate al-Wijh following the outbreak of the Arab Revolt against Ottoman rule in the Hijaz. NCOs and officers of the Egyptian Army trained some of the first regular troops of the Arab Revolt at al-Wijh, while they and their men also protecting the nearby RFC airfield. (Egyptian Army Museum)

military. Muhammad Salih would later play a prominent role in the Sanussi army, serving as the Sanussi leader Sayid Ahmad's Chief of Staff. Meanwhile other Egyptian officers expressed deep concern about British actions and attitudes following the abandonment of Sollum.

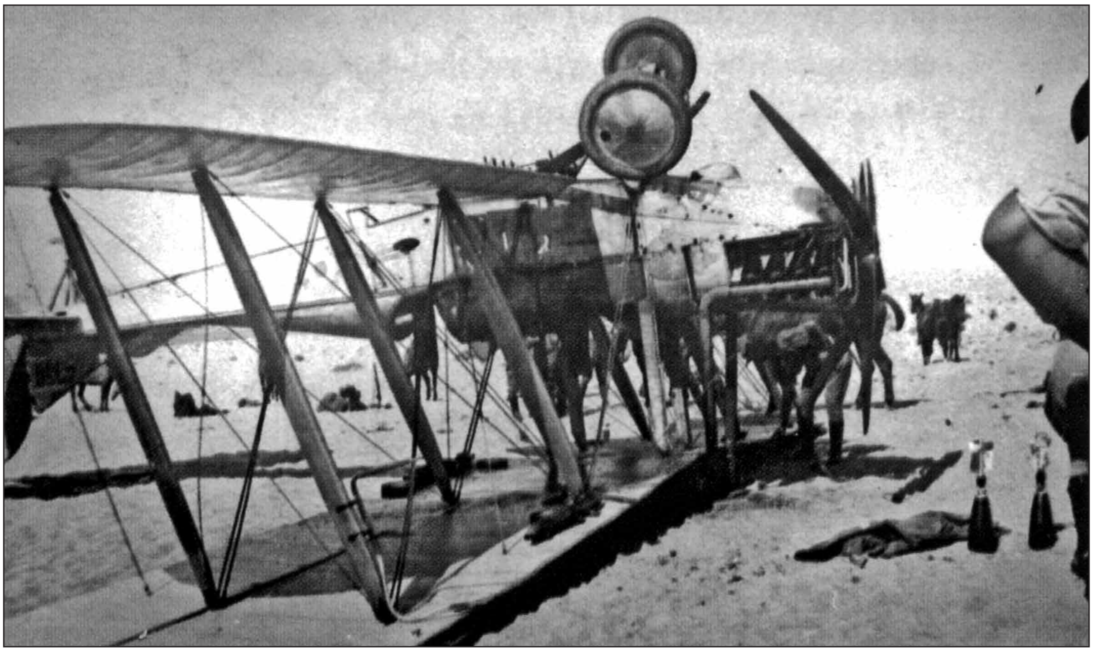
While relations between the British and Egyptian militaries teetered on the brink of crisis, the Sanussi launched another attack, this time directed against oases west of the Nile Valley. After he joined the Sanussi military leadership, the ex-commander of the Sollum garrison Muhammad Salih al-Harb proposed a thrust across the desert south of the Qatara Depression, through the chain of oases which are now known as Egypt's "New Valley", towards the Nile itself. This, he maintained, would sow confusion in the British command in Cairo. However, the two most senior Ottoman officers who were advising the Sanussi army disagreed. They preferred a more straightforward attack eastward though the narrowing corridor of less forbidding desert which lay between the Mediterranean coast and the impassable Qatara Depression. This would be precisely where the British Eighth Army and German Afrika Korps fought the key battles of the Second World War's Desert Campaign a generation later.

Faced with these competing projects, the senior Sanussi leadership attempted to do both and thus divided their strength. Muhammad Salih al-Harb and 10 Ottoman officers were given military command of the southern campaign, under the nominal leadership of Ahmad al-Sharif. It started well when Sanussi forces took Siwa and by March 1916 the Sanussi also controlled the western oases of Bahariya, Dakhla and Farafrah, but not that of Kharga which was held by Egyptian cavalry and some other troops. By now the Egyptian Army had redeployed to face this southern threat, blocking further advances by the Sanussi against the Nile Valley. Some of the youngest and fittest of the recalled Egyptian Army reservists were also sent to defend the Western Oases where Kharga became the main base for a British and Egyptian counter-attack. On 19 March 1916 Archibald Murray took over command of the defence of Egypt. Meanwhile attempts by Sanussi agents or sympathisers to raise revolts in middle and upper Egypt failed and during the rest of 1916 the Sanussi were gradually evicted.

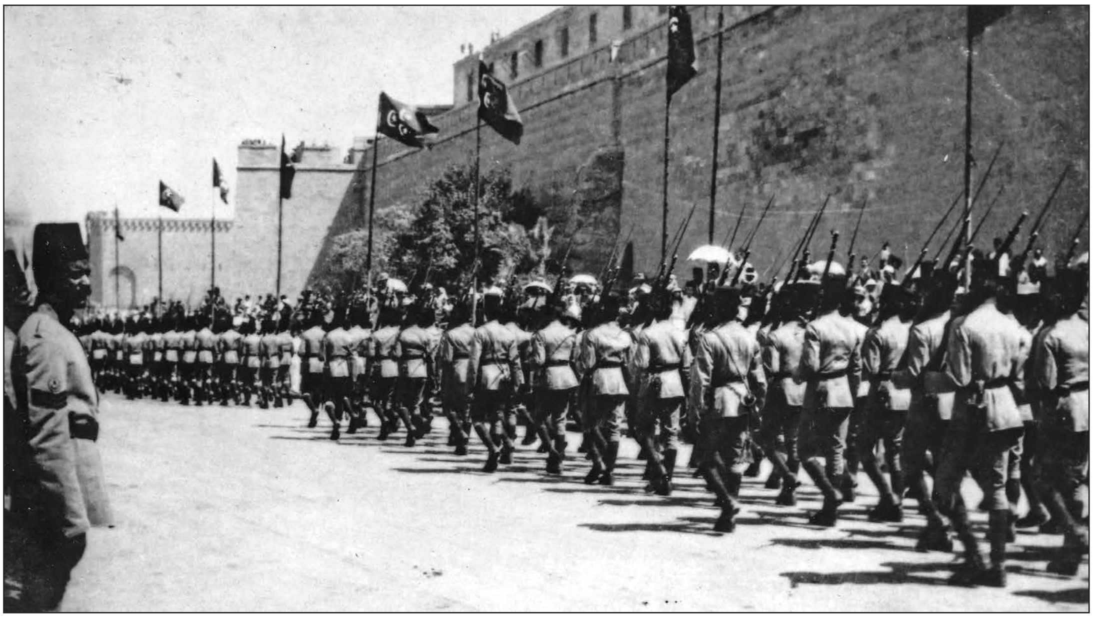
The Sanussi thrust north of the Qatara Depression fared no better and as early as 21 November 1915 a mixed British and Egyptian force had been rushed to Daba'a by railway to secure that railhead from enemy attack. It included an armoured train manned by Egyptian artillerymen with two 12½-pounder guns, plus some British Indian Ghurka soldiers. Other Egyptian armoured trains were used elsewhere, rapidly bringing firepower to threatened stretches of the long and vulnerable Nile Valley. Although the Egyptian Coast Guards and Egyptian Army troops had been withdrawn



The Allied military encampment at Bir Qatiya in north-western Sinai, under attack by Flieger Abteilung 300, better known as the 300th Pasha Squadron, in April 1916. This large camp was home to men of various Egyptian Labour Corps as well as to British and British Imperial troops. (Henkelburg Album, courtesy of The League of World War I Aviation Historians)



BE2c, serial number 4356, of No. 14 Squadron RFC's A Flight in Egypt, nosed over due to landing in soft sand while supporting the Western Frontier Force against Sanussi invaders during June 1916. The two bombs on the right have clearly been removed from the overturned aeroplane. (Private collection)



Following the outbreak of the Arab Revolt in the Hijaz in June 1916, Egypt resumed its traditional donation of a richly embroidered cloth to cover the Ka'aba in Mecca. Such cloths had been taken under military escort from Egypt to Islam's most holy site since medieval times, and the resumption of this Mahmal procession in September 1916 was the occasional for a military parade beneath the walls of Cairo's huge Citadel. (Egyptian Army Museum)

from areas closest to the Libyan frontier by the end of November 1915, other Egyptian units were still deployed elsewhere in the Western Desert. They included a detachment of Egyptian Army Military Works Department (Engineers) who had been sent to Marsa Matruh because no British Royal Engineers were available. Late in November 1915 a squadron of Egyptian cavalry plus a detachment of fifty troopers from the Bikaner Camel Corps was also sent to secure the Wadi Natrun in the desert between Cairo and Alexandria.

The eviction of Sanussi forces continued with fierce fighting in late 1915 and early 1916. On Christmas Day 1915 the bodies of ex-Egyptian Coast Guards, still in their Egyptian uniforms, were found amongst enemy dead following the defeat of the Sanussi at Jabal Midwa. On 28 February 1916 Sidi Barrani was retaken, followed on 14 March by Sollum. The Sanussi leadership now fell back to Siwa, then to Bahariya, Farafrah and Dakhla, all of which contained many Sanussi sympathizers. In October and November Dakhla and Farafrah were also retaken. Siwa was the next British target but this was defended by a determined Sanussi force commanded by none other than Muhammad Salih al-Harb, the one-time commander of Egyptian Coastguards in Sollum. Nevertheless, it fell during February 1917. During this campaign two RFC aeroplanes from No. 17 Squadron had supported the allied forces at Marsa Matruh.

This was the last major battle of the Sanussi Campaign in Egypt, and eventually Ahmad al-Sharif, its nominal leader, was reduced to wandering the Western Desert with a steadily diminishing band of hungry followers, including Muhammad Salih al-Harb. Their attempt to "liberate" Egypt had failed. Instead negotiations began, though they did not get anywhere for a long time and eventually the Sanussi leadership left Egyptian territory, withdrawing to Jaghbub and Sirt in Libya before being taken to Constantinople by a German submarine. Ahmad al-Sharif was still accompanied by his loyal Egyptian lieutenant Muhammad Salih al-Harb and after the Great War ended, Salih al-Harb returned to Egypt where he re-joined the Army.

The operations to regain control of Egypt's western oases had taught the Egyptian Army's leadership some very important lessons, even though Egyptian troops had only played a secondary role. The importance of modern mechanized weaponry, especially armoured cars, had been clear. Aerial reconnaissance of the widely scattered desert battlefields had only been available occasionally but had nevertheless shown its potential in such desert warfare.

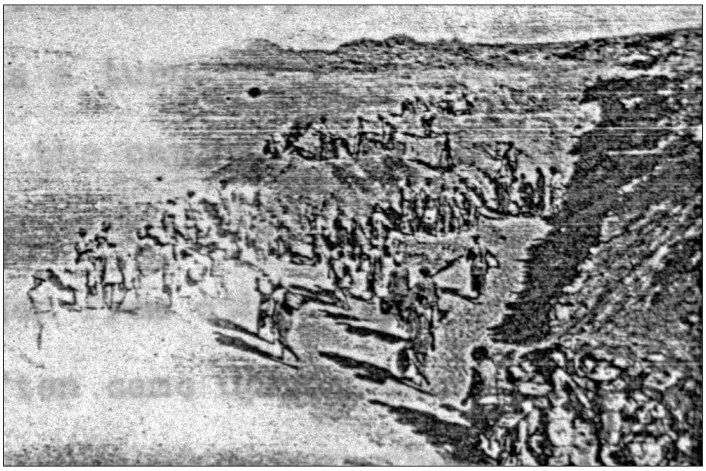
Meanwhile, despite defeat in Egypt and the exiling of its more belligerent leadership to Turkey, the Sanussi movement remained strong in eastern Libya. Here it still controlled a substantial territory and had penned Italian forces into a number of small coastal enclaves. The struggle might be over for the British, who were now much more concerned about events elsewhere, but the Italians were certainly not satisfied.

The Egyptians' experience of the use of air power was more direct in the Sudan where the Egyptian Army was wholly responsible for a campaign against the autonomous but supposedly subject Sultan Ali Dinar of Darfur (Land of the Fur). Indeed, the only help that they received from the British was in the form of a handful of RFC aeroplanes, while the campaign to defeat Sultan Ali Dinar of Darfur was the largest operation undertaken by the Egyptians during this period.

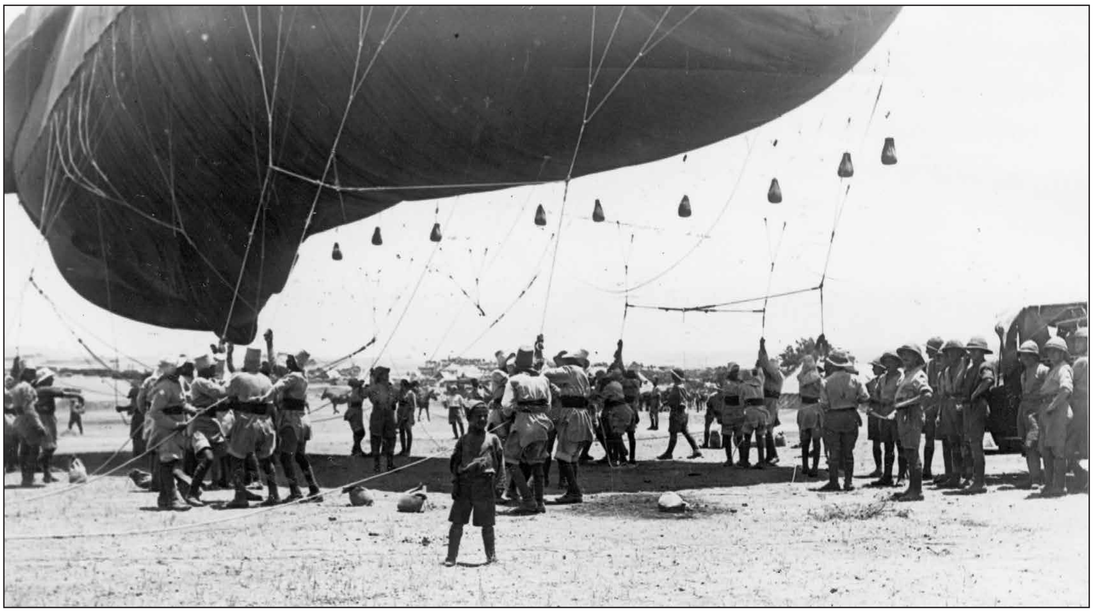
At the start of the First World War, Britain had hoped to keep Sultan Ali Dinar friendly, or at least neutral. Meanwhile, the Sultan had problems of his own caused by tribes within the vast area he regarded as his territory. These included the turbulent Rizaiqat, and also the Kababish tribe of Kordofan province – an area over which the Anglo-Egyptian authorities in Sudan exercised effective control. At the same time Ali Dinar tried to maintain friendly relations with the Sanussi who control the large oasis of Kufra in neighbouring southern Libya. There had already been a serious clash between Sultan Ali Dinar's forces and the Rizaiqat in 1913. In this the Rizaiqat had unexpectedly defeated their Darfuri overlord, inflicting heavy losses on the Fur (Darfur) army. However, this outcome was not acceptable to the Anglo-Egyptian authorities in Khartoum, who forced the Shaykh of the Rizaiqat to submit to Ali Dinar. Ali Dinar's problems continued into 1914, particularly with another tribe, the Baqqara who claimed Arab descent. Many of the latter were forced to flee their homes, some seeking refuge in neighbouring French controlled areas.

After the Ottoman Empire entered the war as Germany's ally, the leaders of all the peoples and tribes of the Egyptian Sudan pledged their loyalty to the Egyptian ruler; all, that is, except Sultan Ali Dinar of Darfur. He may already have been leaning towards an alliance with the Sanussi who were, nevertheless, too far away to provide effective help. On the other hand, in late 1915 the Sanussi may have sent Ali Dinar up to 2,500 relatively modern Mauser rifles and 400 cases of ammunition. In reality only 260 rifles and two boxes are likely to have arrived, and when the crisis came many of Ali Dinar's warriors still fought with traditional spears and safariq heavy wooden axe-like weapons. The Sultan of Darfur did, however, send the Ottoman Sultan a letter stating his support and claiming that fire had rained upon the heads of the "rebel" Rizaiqat tribe while the skies had also rained blood. He also renounced his allegiance to the Egyptian ruler on 10 February 1916.

With this crisis brewing on their western frontier, the authorities in Khartoum sent additional troops to al-Nahud and al-Ubaid, close to Darfur territory. Meanwhile Ali Dinar reportedly sent Fur infantry and cavalry to the uplands of the Jabal Hilla, which could have made a good location from which to invade Sudanese territory. The Sultan of Darfur also sent threatening letters to the Egyptian and British government of Sudan whom he addressed as the "Governor of Hell in Kordofan and Inspector of Flames in al-Nahud", warning that he would attack after the seasonal rains had come.



A unique but very poor quality photograph of men of the Egyptian Labour Corps cutting out an observation "balloon bed" in Palestine in September 1917. By moving huge quantities of soil with hand tools, they constructed a hole surrounded by a sand embankment in which an observation balloon, its assorted equipment and machinery could be hidden from enemy view – at least at ground level. (H.R.P. Collett Archive)



The Egyptian Army's most immediate experience of the new phenomenon of air warfare was the support the Egyptian Army Camel Corps provided to several RFC Observation Balloon sections in Palestine. Seen here in 1917, fez-wearing Egyptian soldiers are trained in the meticulously coordinated work of ground-handlers, watched by solar topee-wearing British soldiers. (Egyptian Air Force Museum)

Rather than await Ali Dinar's threatened attack, the Anglo-Egyptian government of Sudan decided upon an immediate advance. This they would do before the rains came, at a time when enemy forces were confined to the few available water sources. It is possible that reports of Fur military concentrations in the Jabal Hilla were just a pretext for an Egyptian attack, because this operation was undertaken so quickly that it had probably been planned well ahead. The Egyptians were also fortunate in their timing, because the British position in Egypt had been strengthened with the arrival of additional troops from the failed Gallipoli campaign. British concern about the Sanussi in early 1916 meant that they feared the possibility of Ottoman or even German advisors reaching Ali Dinar via Sanussi territory. Before attacking Ali Dinar the Egyptian Army sent two additional Egyptian battalions of infantry to Sudan, initially to replace the Sudanese battalions which were committed to the Darfur campaign.

The British had meanwhile agreed to protect the Nile Valley between Aswan and Wadi Halfa which was vulnerable to raids from

Cheerful men of an Egyptian Labour Corps unit after receiving a financial bounty, having built a floating "barrel bridge" over the Auja (Yarkon) River in central Palestine in December 1917. (Egyptian Army Museum)

the west. Here the famous Darb al-Arba'in (Caravan Route of Forty Days) linked Egypt, Darfur and beyond. This deep desert region was patrolled on behalf of the Egyptian government by local tribal patrols, which also gathered information, including information about any contacts between Darfur and the Sanussi in southern Libya. In such remote areas tribes who were already hostile to Sultan Ali Dinar, such as the Rizaiqat, proved very useful.

The resulting Darfur Field Force was led by British officers of the Egyptian Army. In Command was Liwa (Lieutenant Colonel) P.V. Kelly, originally of the 3rd Hussars. His little army consisted of around 2,000 men, consisting of five Companies of the Egyptian Army Camel Corps under Arthur Huddleston (Huddleston Bey), two Companies of Mounted Infantry under Biqbashi Cobden, eight Companies of Sudanese Infantry (four from the 13th Sudanese under Ahmad Fahmi, two from the 14th Sudanese under a British officer and two from the Arab Battalion under a British officer, two Companies of Egyptian Infantry from the 4th Battalion, six mountain guns under two British and two Egyptian officers (Hasan Husni Alawi and Mahmud Zaki Rashad), fourteen Maxim machineguns under Muhammad Subki, some of which had British crews in a rare example of British troops being under an Egyptian officer. The force was also supported by medical and engineering details, and five transport companies with 1,200 camels. Any unreliable elements in this force were soon dealt with; two junior officers being sent back to Cairo while Lieutenant Abd al-Majid, an Egyptian officer in the Camel Corps, had already deserted to Ali Dinar of Darfur in March 1916.

The little army assembled at al-Nahud on 8 March 1916. What set this Darfur Field Force apart from many other colonial armies of the late 19th and early 20th centuries was the presence of a flight of four British RFC aeroplanes, plus their own motorised transport. Opposing them at al-Fashir was a Fur army with an estimated strength of 800 cavalry and 3,000 regular infantry armed with rifles but having poor training and not much ammunition. These men were regarded as Ali Dinar's regular soldiers. They were accompanied by from 1,000 to 2,000 irregular tribal infantry, almost all armed only with spears. Dotted around the area were other small Fur garrisons ranging from 25 to 300 men each.

British willingness to send aeroplanes to this seemingly obscure and distant campaign showed that they regarded it as strategically important, even at a time when aircraft were in very short supply for the British high command in Cairo. Clearly Sir Archibald Murray expected a handful of such machines to have a substantial moral impact upon the Darfur army and so, on 30 March, he agreed to lend them for one month, along with all that would be necessary for them to operate independently of any support in a particularly unforgiving climate. The closest RFC unit was C Flight, No. 17 Squadron, which was currently based outside Suez with BE2cs. From there men and machines had to be sent by sea to Port Sudan, then by railway to al-Ubaid and the railhead at al-Rahad.

Even when it arrived, this Flight under the command of Captain Bannatyne, was still about 55kms from the closest scene of operations, and from there it had to get to al-Nahud in the Jabal al-Hilla. Most of C Flight's spares, fuel and supporting equipment was carried by camels from the al-Rahad railhead to the front, while the aeroplanes were flown. Intermediary landing-grounds were therefore cleared while large cloth arrows were placed at intervals of almost 50 kilometres along the whole route as guides for the pilots. Smoking fires were also lit to draw the fliers' attention to these ground markers. Local government officials and indigenous leaders were tasked with lighting these fires when told that the aeroplanes were approaching, and to keep the smoke rising until the aeroplanes were out of sight.

The Darfur Field Force set off from Khartoum on 27 February 1916, reached the frontier of Darfur on 19 March and crossed into Ali Dinar's territory the following day, meanwhile erecting a telegraph line behind them. Fur cavalry made demonstrations outside Abiad on 14 and 19 April, followed by a real attack on 5 May, though this was driven off by Egyptian artillery. By 6 May, two BE2c aeroplanes were based at airfields al-Ubaid and al-Rahad, with an HQ and forward airfield at Bir Abyad (Abyad Wells) where the first aeroplane apparently landed on 11 May. The role of these machines and their crews was reconnaissance and, where possible, to bomb or strafe the enemy.

Thereafter, the campaign against Ali Dinar and his army went almost completely according to plan. This was despite its distance from railways or proper roads, the difficulties of the climate and the courageous if doomed efforts of the enemy. On the far side of Sultan Ali Dinar's territory, the French colonial authorities in Wadai agreed to help the Egyptians if needed and where possible. Meanwhile Ali Dinar sent letters to the unsympathetic Rizaiqat tribe, claiming

Egyptian Prince Abbas Halim in the uniform of a German officer during the First World War, probably while he was serving on the Eastern Front. (Nour Bardai collection)

amazing victories and stating that his men remained miraculously unhurt by their enemies' fire. Clearly he still hoped to win them over to his side. The first aerial reconnaissance of al-Fashir was carried by Lieutenant F. Bellamy on 12 May. According to a British officer serving in the Egyptian Army during this campaign, the Egyptian and Sudanese soldiers were very impressed when they saw the BE2c gleaming against the golden sunrise as it turned in a downward circle to land on the prepared stretch of ground, murmuring "By God! our General is very clever".

As a force consisting of sixty mounted infantry scouts, eight artillery pieces, fourteen machineguns, eight companies of infantry and a field hospital prepared to assault al-Fashir, a BE2c dropped propaganda leaflets on the town on 12 May. Liwa Kelly decided not to approach directly but to take a longer route via the reliable water-wells at Mellit (Malit), to the north of al-Fashir. His troops therefore set off in two groups, those on foot going first while the mounted units came second. BE2cs bombed Mellit on 17 May, the village being taken the following day. On the 22nd the little army formed a traditional open square formation, as used in the Sudan since at least the middle of the 19th century, and headed south towards the enemy's capital. The Egyptians and Sudanese were, however, harassed by enemy horsemen and camel riders almost all the way. In response, the Egyptians shelled and dispersed any large concentration of enemy troops which came into range.

The first and only real battle of the Darfur campaign was fought near Beringia on 22 May. Some 20kms short of al-Fasher, and some 500 metres from the village of Beringia, the square of Egyptian and Sudanese soldiers established a similarly square field fortification. Ali Dinar's troops already held a partially entrenched position about 600 metres to the south and extending about one kilometre east and west. Relatively little of the enemy position could be seen from the Egyptian field fortification and Liwa Kelly could only be sure of the location of a few hundred cavalry to his front and left. However, he also knew that some two hundred infantry were entrenched somewhere to his right-front. What Kelly needed was proper reconnaissance before making a flanking attack against the enemy's right. Kelly then intended to wheel behind the enemy infantry while his own infantry and artillery pinned the enemy down with fire from the face of his square which was itself facing the enemy.

A portrait of Prince Abbas Halim wearing flying gear during his time in the German Luftstreikräfte. (Nour Bardai collection)

This attack was being readied when Kelly saw that a company of Egyptian Camel Corps, advancing from the right towards Beringia, had been almost surrounded by a sudden enemy onslaught. However, this move by the enemy exposed many of them to intense Egyptian rifle fire. Nevertheless, some of Ali Dinar's men reached within 10 metres of the square. This pressure continued for almost three-quarters of an hour until the Fur began to waver. Kelly now ordered a counter-attack, whereupon the Fur army fled, leaving 261 dead and 96 seriously injured on the battlefield. In this very one-sided battle the Darfur Field Force lost a mere three officers wounded, five other ranks being killed and eighteen wounded.

The outcome of the Battle of Beringia is nevertheless misleading. Ali Dinar had correctly predicted the Field Force's line of advance and had planned to make a flank attack as it passed. His plan failed because his ill-disciplined troops attacked the Egyptian Camel Corps too soon. If this attack had been delayed, the main Fur assault might have breached the Egyptian square, in which case the butcher's bill would almost certainly have been more balanced. It is even possible that the square could have collapsed, in which case victory for Ali Dinar was not an impossibility. In the event military discipline, training and hugely superior firepower had given victory of the Egyptian-Sudanese Army.

Sultan Ali Dinar's chief military commander, Ramadan Ali, was killed in the battle of Beringia, along with a competent and loyal slave named Sulayman. These were serious losses for Ali Dinar, but he still had many troops, so the Sultan of Darfur rallied the fugitives in the hope of making a stand at a large dry riverbed north of Beringia. In fact most of his remaining men deserted during the night. The following morning about five hundred Fur cavalry and three hundred infantry tried to attack the Darfur Field Force's fortified encampment but were driven off quite easily. This may, in fact, have been an accidental clash rather than a planned assault by Sultan Ali Dinar. The Sultan himself now prepared to flee but he and his immediate followers were bombed by a BE2c, though its pilot was himself wounded by ground fire.

While serving in the German Army on the Eastern Front, Prince Abbas Halim was shot in his right arm by a Russian soldier. Thereafter he could never fully bend that arm, but nevertheless reportedly went on to train as a pilot. (Nour Bardai collection)

Ali Dinar nevertheless escaped along with relatively few followers, including Lieutenant Abd al-Majid, the Egyptian Camel Corps officer who had deserted to him at the start of the campaign. At first Ali Dinar sent messages offering to surrender but then seemingly changed his mind and endeavoured to continue the struggle. The Flight of RFC aeroplanes did not take part in the subsequent prolonged pursuit of the ruler of Darfur. Instead they were now withdrawn. On 7 October two hundred and fifty troopers of the Camel Corps and the 13th Sudanese Infantry Regiment set off for Kas in search of Ali Dinar, encountering a force of one hundred and twenty Fur riflemen and 1,000 spearmen under Ali Dinar's son Zakariyah. The Fur were attacked and routed.

Ali Dinar's days may have been numbered but the pursuit would take several months. On 27 October, a French military outpost in the capital of the neighbouring region of Dar Sila offered to help find Ali Dinar who had again slipped through the Sudanese net, and the somewhat embarrassed authorities in Khartoum accepted their offer. On 1 January 1917, Darfur officially became part of the Anglo-Egyptian Sudan but in May 1917 Ali Dinar was still at large. At last the now deposed Sultan's camp was located and an Egyptian Army force under Huddleston Bey hurriedly marched against him with 10 Egyptian officers, four machineguns, two small artillery pieces, two hundred and sixty troopers of the Camel Corps, a hundred men of 13th Sudanese Battalion, twelve mule-mounted troops of an Arab Infantry Battalion, eight police and medics, plus three British officers and a British political agent. When they reached Ali Dinar's camp the ex-Sultan's followers fled, but not so Ali Dinar and his family. They sought refuge in nearby shrub country, so Huddleston assembled seventy local ponies for the hundred men of what came to be known as "Huddleston's Horse". These set off in pursuit on 5 November. Ali Dinar's party was cornered the following day and following a brief exchange of fire the enemy leader was found dead alongside his wounded son. Next to them another two sons and Ali Dinar's court chamberlain awaited capture. Yet another two further sons escaped but surrendered soon afterwards.

The Darfur Campaign had a significant impact in Egypt, and especially within the Egyptian armed forces. King-Emperor George V of Britain and the Empire sent a telegram to the British Governor General of Sudan expressing his pleasure. For his part, the Governor General went to the Egyptian Army Officers' Club on the occasion of the Islamic New Year 1335 celebration (28 October 1916) where he gave a speech praising the efficiency of the Egyptian Army. Not surprisingly, the Egyptian Sultan also congratulated his officers and men. He had already sent a letter from his palace at Ras al-Tin to the British General Officer Commanding in Egypt. Dated 3 June 1916, it offered particular praise to the work of the Flight of No. 17 Squadron BE2cs:

> My Dear General,
> I have today received a letter from the Sirdar [British commanding officer of the Egyptian Army] giving me details of the great services rendered by the Royal Flying Corps in the recent operations which led up to the taking of El Fasher.
>
> I wish to convey to you without delay both my congratulations and my gratitude for the valuable help you have accorded us and which has very largely contributed to the success of my Army's operations... (etc)
>
> Believe me, My dear General (signed) Hussein Kamil.

Unfortunately, the end of the Darfur campaign was followed by a quarrel between the British and Egyptian governments concerning who should pay the costs of this operation.

Elsewhere in the Sudan, the problems were less immediate and less threatening. In fact, the larger part of the Egyptian Army – some 14,000 men spread across forty-one garrisons – was stationed in Sudan throughout the First World War. There was usually also a battalion of British or Imperial troops in Khartoum. The only units of Egyptian Garrison or Heavy artillery in the Sudan were similarly based in Khartoum. These military assets were backed up by a determined British propaganda campaign to retain the Sudanese peoples' confidence in British imperial might, itself helped by what has been described as the "light hand" of the Egyptian-British administration.

The only real exceptions to the general quietness of the Sudan were seen in the Nuba Mountains of the south where there were a number of local tribal risings. These, however, had nothing to do with the wider world war and all were quelled by Sudanese and Egyptian troops, if occasionally with difficulty. Sometimes these men were under Egyptian officers, and at others under British officers serving in the Egyptian Army with Turco-Egyptian ranks. Among the latter were Bimbashi (Major) Irwin and Bimbashi Hill, who would later command Egyptian troops in Palestine under General Allenby during the First World War. Here Hill would entertain the officers of the RFC Balloon Detachment with stories of his adventures in the Sudan. These included eating a giraffe and consequently getting into trouble with the Egyptian authorities.

Apparently "Bim" Hill's primary object in life was "a Brighter Mess", as he would tell his RFC colleagues; "It takes a hell of a lot of comfort to kill me". Before long the giraffe story came out. It seemed that after many months wandering through the trackless wastes of the Sudan with his company of Sudanese troops, Bimbashi Hill and his men were running short of food. Fresh meat had long since ceased to feature in their mess-tins but at an opportune moment a giraffe appeared and was promptly shot. Its carcase provided plenty of meat for "Bim" Hill's near starving soldiers. Unfortunately the Egyptian Government somehow heard about the killing of the giraffe and, as Hill explained, "correspondence ensued". He and his superiors failed to see eye to eye and after much procrastination Bimbashi Hill had to pay a fine of 10 Egyptian pounds.

The role of the Egyptian Army in the Arab Revolt has rarely been recognised, largely because of Lawrence "of Arabia's" exaggeration of his own importance. T.E. Lawrence may have introduced the concept of modern guerrilla war to the Arab Revolt in the Hijaz, but Major Aziz al-Masry had himself learned these skills in Libya, against the invading Italians. Having returned to Egypt from the Ottoman capital for his own safety shortly before the outbreak of the First World War, Aziz al-Masry either made contact with, or was contacted by, Sharif Husain of Mecca. The latter wanted to create a regular army, capable of taking on the Ottomans in open battle, so he welcomed Aziz al-Masry to the Hijaz in 1916.

Some British heard rumours that al-Masry wanted Sharif Husain to form an alliance with the Germans rather than the British but, though there might have been some truth in this allegation in the earliest stage of the Great War when German victory appeared highly likely, it was no longer the case in 1916. In Mecca, the Sharif appointed Aziz al-Masry as his Chief of Military Staff and, in effect, as the Arab Revolt's Minister of War. In Egypt, despite having recommended Aziz al-Masry to Sharif Husayn, the British were also glad to see the troublesome Turco-Egyptian officer leave because of his still openly expressed admiration for German military prowess, though not for Germany's war aims. Though a Muslim, al-Masry did not change his Ottoman and essentially European style of personal life. Clearly, he missed some of his previous comforts, for when the British intelligence officer Lewis Barrington Weldon met al-Masry in the summer of 1916 and offered him a whisky and soda, al-Masry eagerly replied; "Have you Irish? I prefer it". At that time al-Masry was busy establishing the Arab Revolt's first regular and uniformed military units.

Initially, Sharif Husayn wanted Arab autonomy within a reformed Ottoman Empire – as did Aziz al-Masry – but as the leader of the Arab Revolt came out more openly in favour of complete independence and the dismemberment of the Ottoman state, he quarrelled with al-Masry. The latter therefore resigned and returned to Egypt in December 1916. Another reason for Aziz al-Masry's resignation was his opposition to a full-scale attack by the Arab Revolt upon the Ottoman-held holy city of Madina, correctly declaring that this would fail because the Arab Army was not yet strong enough. In fact, the Ottoman garrison in Madina would hold out until after the end of the First World War.

By the time Aziz al-Masry resigned, he had planned a campaign built around a corps of Arab regular troops supported by much larger numbers of Bedouin irregulars. The initial nucleus of such a regular force was recruited from the settled peasant villages around Madina and from similar villagers who had been driven from the area of Mecca by the Ottoman garrison. Interestingly enough, the disciplined core of the Prophet Muhammad's army had been drawn from precisely the same communities back in the 7th century AD.

These Arab regulars were trained by Egyptian officers and NCOs at al-Wijh on the Red Sea coast. Subsequently, about 1,000 Arab volunteers from amongst Ottoman Army prisoners-of-war in British hands were added to the regular Army of the Arab Revolt. These men were, of course, already trained infantrymen and all were now given additional instruction in specialist work such as the use of light or medium machineguns as well as light field artillery. A number were selected to be trained as sappers specialising in the demolition of bridges, railway lines and suchlike. The primary function of these regular troops was initially to contain the Ottoman garrisons while the irregulars operated as guerrillas with some regular support, raiding isolated or vulnerable Ottoman outposts. The regulars were also to set an example of military discipline to Bedouin warriors who were not accustomed to facing enemy aircraft, artillery and close combat with the bayonet. Without such an example, it was feared that the irregulars would prove little more than a nuisance to Ottoman troops in the Hijaz, prompting enemy reprisals without seriously weakening the foe.

In addition to providing instructors for the Arab Army, the Egyptians had, from the start of the Arab Revolt, also sent troops to fight alongside what came to be known as the Sharifian Arab Army. They included a mountain artillery battery with four old Krupp field guns and some machineguns which had been sent to the Hijaz immediately the Arab Revolt broke out in June 1916. Two British officers named Joyce and Davenport were later put in overall command of the Egyptian units in Arabia, Joyce's Egyptians serving alongside the Arab Northern Army with T.E. Lawrence, while Davenport's men served with the Southern Arab Army.

It was in the latter theatre that the Egyptian contribution was perhaps most significant. The Arab Southern Army's front around Mecca was more static than that of the wide-ranging Arab Northern Army where only the Egyptian Camel Corps could find an immediately useful role. Davenport's Egyptians were by no means inactive, however, and they undertook many night raids against Ottoman positions. Five Egyptian soldiers captured during one such raid later escaped from an ambushed Ottoman train during one of the Northern Army's attacks on the Hijaz railway. In fact, the solid Egyptian infantry and artillery seem to have been among the most effective troops in the Southern Army. One of their senior officers, Muhammad Sadiq Yahya Pasha who was a veteran of the Egyptian reconquest of the Sudan at the end of the 19th century, was subsequently decorated for his services in the Hijaz.

Meanwhile the Egyptian Army detachments with the Northern Army consisted of two hundred Egyptian infantry, plus a medical detachment, sent to Aqaba after it was taken from the Ottomans on 6 July 1917. They also had substantial support from the Egyptian Transport Labour Corps (ETLC). An Egyptian communications unit was similarly based at Aqaba. However, the best-known Egyptian force with the Arab Northern Army was a company of Camel Corps led by Bimbashi (Major) F.G. Peake, though it was later converted for other duties. Peake Pasha, as this British officer came to be own, would later create Jordan's famous Arab Legion.

Loaned by the Egyptian Expeditionary Force, this particularly Egyptian Camel Corps unit was unlike most others in being recruited from Egyptian fellahin or settled peasantry which might account for its totally unflappable but also somewhat non-belligerent attitude when compared to the ferociously enthusiastic Arab troops. Armed with Martini-Henry rifles, these Camel Corps troops fought in a typically Egyptian manner, with caution, by the book, and with an apparent total disregard for enemy fire. In the later stages of the Arab Revolt they were converted into a sapper unit which made better use of the Egyptians' higher standard of discipline and training, as well as their ability to remain calm while demolishing a railway line under enemy fire. Despite derogatory remarks by T.E. Lawrence, the conversion of camel mounted infantry into combat engineers was a recognition of their military value. Meanwhile, the British section attached to the Northern Army under Lieutenant Colonel P.C. Joyce consisted of the Hejaz (Hijaz) Armoured Car Battery and one Flight of RFC aeroplanes.

The Arab Northern Army's first advance actually reached the Jordanian oasis of al-Azraq. The raiding force which seized the oasis Included a unit of Egyptian Camel Corps for demolition work. In fact, the opening move was made on 15 September by Bimbashi Peake's Egyptian Camel Corps, accompanied by Scott-Higgins' Gurkhas and two armoured cars; their task being to sever the Hijaz railway between Dara'a and Amman. However this diversionary attack failed in its primary objective.

In April 1918 the Arab Northern Army attacked Ma'an and its railway station but were beaten back in fierce fighting, so the Emir Faysal ordered the Arab Northern Army to besiege the town instead. The operation was planned by Lieutenant Colonel A. Dawnay, younger brother of Guy Dawnay who was General Allenby's Deputy Chief of Staff. Three columns advanced into what is now southern Jordan. The northern column consisted of Arab irregular cavalry, while Arab regular infantry formed the central column and the southern column included more Bedouin irregulars, British armoured cars, and the Egyptian camelry under Lieutenant Colonel Dawnay himself.

In April the Egyptian Camel Corps company under Peake formed part of a Mobile Column commanded by Lieutenant Colonel Dawnay; this being sent against Tal al-Shahin railways station in April 1918. It consisted of Arab Bedouins, British armoured cars, one Flight of RFC aeroplanes, and a French Detachment under Colonel Pisani. On 19 April 1918, the railway station was stormed and 54 Ottoman prisoners were taken. A large number of camels from the Egyptian Camel Transport Corps were also transferred to the Arab Northern Army while their drivers and supervisors were sent back to Egypt. Finally, the Army of the Arab Revolt had also been loaned some detachments of the Egyptian Labour Corps from No. 2 Camel Depot. Later that summer, the Northern Army was reorganized for the final thrust into Syria.

Meanwhile, Aziz al-Masry had returned to Egypt from Hijaz, but unfortunately became increasingly unpopular with the senior British Army command in Cairo. In fact al-Masry was eventually forced to leave the country in 1917. Aziz al-Masry wanted to go to neutral Switzerland but this had a frontier with enemy Germany, so he was only allowed to go to similarly neutral Spain. There he spent the last year of the First World War before moving to Germany after the war ended. Discontent simmered within the Egyptian officer corps throughout the First World War, largely being based upon internal matters rather than Egyptian participation in the conflict. Complaints ranged from the Egyptians' exclusion from senior staff appointments to their inadequate rates of pay and stagnant promotion. In the event there were only a tiny number of cases of misconduct by Egyptian officers while the loyalty of the rank and file remained solid, particularly amongst those serving with General Allenby's Egyptian Expeditionary Force in Palestine.

It is not known whether Bakir Ahmad, a Sudanese orderly who worked for Captain L.B. Weldon of Britain's Royal Naval Air Service, was or had been in the Egyptian Army. He nevertheless had the dubious honour of being one of the first of the Sultan of Egypt's subject to be bombed from the air. This happened when Bakir Ahmad and Captain Weldon were aboard the British seaplane carrier *Anne Rickmers*, lying a short distance off the Wadi Gaza in the south-eastern corner of Palestine. As Weldon later described in his book, *Hard Lying*, the *Anne Rickmers* had left Port Said on 15 April 1916, escorted by their "old friend" the French Navy's Torpedo Boat No. 250. One of *Anne Rickmers'* seaplanes had just returned from a reconnaissance mission and was being hoisted on board when there was a large explosion in the sea between these two ships. The men thought they were being fired on by an enemy submarine. As Weldon explained; "suddenly my little Sudanese orderly – Bakir Ahmad – called out, "Look Sir!" and pointed skywards. I looked up and there, right over us, were two enemy aeroplanes. The explosion was caused by a bomb they had dropped on us. They then dropped a couple more, which went wide of us, and continued by opening fire on us with their machine guns."

Neither the British nor the French ship had anti-aircraft guns and the aeroplanes were flying at over 650 metres, so shooting at them with rifles was ineffective. The enemy machines were Rumpler C-Is of the recently arrived German 300th Pasha Squadron. It had been based at al-Arish since 1 April, under command the Ottoman Fourth Army, and led by Captain Von Heemskerk.

The main front in the struggle between General Allenby's Egyptian Expeditionary Force and Jamal Pasha's Fourth Army in Palestine would soon be established only a few kilometres away, around the Palestinian town of Gaza. It would remain until the British breakthrough at the Third Battle of Gaza. Here the Egyptian Army's contribution was small and almost entirely behind the lines. The Egyptian Expeditionary Force (EEF) was actually created on 10 March 1916 when General Archibald Murray brought together the pre-existing Mediterranean Expeditionary Force and the British Imperial Force in Egypt. Its first major battle was at Romani in north-western Sinai on 3-5 August 1916.

During 1916 the most important contribution by the Egyptian Army to the Sinai and Palestine Campaign was in the support and transport services of the Egyptian Expeditionary Force. Here about 2,800 men of the Egyptian Army Reserve, and eventually almost 10 times as many men of the Egyptian Labour Corps, took part in the construction and operation of military railways. However, higher casualties were suffered by the Egyptian Transport and Labour Corps than by the Army. The Egyptian Camel Transport Corps in particular often went up to the firing line with British troops and frequently found themselves under enemy artillery fire. Many drivers were killed but a much larger number of men died from disease. At first, both the Labour Corps and the Camel Transport Corps were very poorly treated by the British EEF, enduring ferocious discipline and seemingly endless hard marching. Later, as the campaign pushed on into Palestine, these long-suffering Egyptian conscripts where treated better.

During the war of movement – which characterised the liberation of Sinai in 1916 and early 1917 – British RFC Observation Balloon Squadrons had no real role, but things changed when the British advance stalled outside Ottoman-held Gaza. It was here that the close relationship between Britain's "balloonatics" of the EEF and various Egyptian formations developed. Since January 1916 the balloon units were led by Commander F.R. Wrottesley. Under him were Flt Lieutenant A. W. Cassey's No. 14 Section and Lieutenant A.G.T. Applin's No. 13 Section. These units supported British, Indian and Australian troops, as well as the Royal Navy's coastal bombardment.

The RFC Balloon Sections attached to the Egyptian Expeditionary Force were soon reorganised. However, the basic structure of the EEF itself under the command of General Allenby would remain essentially the same for the rest of the war, though of course it evolved and was strengthened over the next two years. Egyptian Army troops formed a very minor part of what became a substantial military machine and none served in the front line. Instead No. 49 Balloon Section employed Egyptian infantry as ground handlers while men of the 1st Egyptian Infantry Battalion garrisoned the vital port of Aqaba and also built a section of strategic motor road northwards through the rugged Wadi Itm Pass.

Egyptian personnel were also attached to the EEF's General HQ, where Ali Riza Pasha al-Rikabi was Chief Administrator of the Occupied Enemy Territory [East] Administration (OETA) under the overall command of a British officer. Another British officer was in charge of OETA South while Colonel P. de Piépape, CO of the French Detachment in this theatre, was in charge OETA North. There was no OETA West because the main thrust of the EEF's attack was along the Mediterranean coast.

The EEF's Headquarters Troops also included the observation balloon sections. Baulked by the Ottoman Army's stubborn defence of Gaza, General Allenby had requested additional air support in spring 1917. In June that year the War Office in London offered to send two kite balloon sections to Egypt. This offer was eagerly accepted and in August, the 21st Balloon Company (Sections 49 and 50) arrived. Under the command of Major V.A. Beaufort, No. 21 Balloon Company was promptly attached to the Fifth Wing of the Palestine Brigade, RFC Middle East, under Brigadier General W.G.H. Salmond. This had its HQ at al-Kilab with an Advanced HQ at Dayr al-Balah. No. 49 Section was positioned at Shaykh Shabasi and No. 50 Section at the Wadi Gaza. Also attached to Allenby's General Headquarters were Royal Army Service Corps Donkey and Camel Transport Companies with their local manpower.

Thus, in June 1917, British air units on the Palestine front consisted of the 40th Wing with two squadrons and a Balloon Company. By September 1918 this strength had increased to a Brigade with two wings with seven squadrons, and the Balloon Company which had itself increased to Nos. 49, 50 and 57 Balloon Sections. During the later months of 1917 this force operated from the aerodrome at Dayr al-Balah but after the fall of Gaza the Wing advanced to another airfield near al-Majdal.

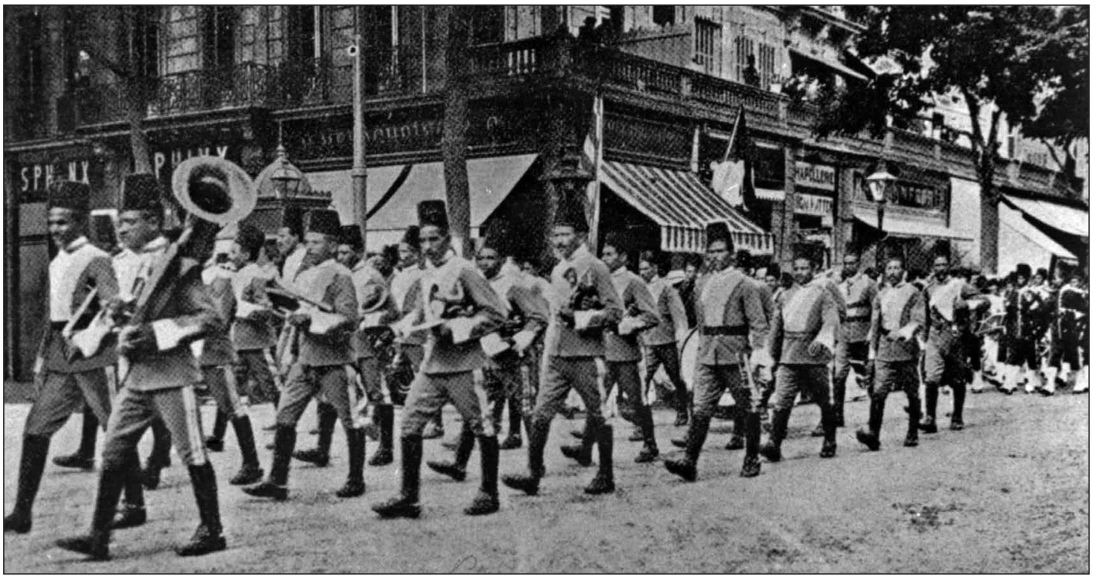
The EEF Order of Battle also shows that Palestine Lines of Communication Mounted troops included several Egyptian units; namely Nos. 1, 3 and 6 Companies of the Bikaner Camel Corps of the Egyptian Army, Arab Scouts who had been transferred from the Egyptian Frontier District Administration, the 1st Cavalry Squadron of the Egyptian Army in the Occupied Enemy Territory Administration, No. 1 Company Egyptian Camel Corps who were also employed in the Occupied Enemy Territory Administration, as well as the sappers of Nos. 1 and 2 Egyptian Engineer Companies. In addition, Egyptian infantry in the EEF consisted of the 1st, 2nd and 3rd Infantry Battalions, the Egyptian Detachment of the Palestine Gendarmerie, two companies of which were again employed in the Occupied Enemy Territory Administration.

The Signals Services of the Lines of Communications Units included the Egyptian Construction Section which itself consisted of the Egyptian Labour Corps with its HQ and Advanced Depot at Lydda and a Base Depot at al-Qantara, plus Nos. 1 to 12, 21, 23 to 27, and 29 to 120 Labour Corps Companies. Similarly, the Military Railways Units, which took part in the construction and operation of military railways, included about 2,800 men from the Egyptian Army Reserve and an eventual 26,000 men of the Egyptian Labour Corps. In practice there was a significant rotation of men in the Egyptian Labour Corps, so that the number of individuals who served was much higher, reaching a total of 74,252 in 1917, and no less than 134,971 in 1918. Over the years the Egyptian Labour Corps provided men for the RFC and latterly the RAF, including in signals and salvage duties.

The Egyptian contribution to the EEF's Medical Services was similarly significant. In fact, during the bloody Gallipoli Campaign a tented hospital had already been established on Heliopolis aerodrome, where the first Air Meeting had been held in 1910. Subsequently the Egyptian Hospital Trains Organization included Nos. 49 (formerly 44) and 57 (formerly 11) Egyptian Hospitals and Convalescent Depots. Those attached to the Palestine Lines of Communication branch consisted of Nos. 1 (formerly 6), 2, 3 and 4 Egyptian Stationary Hospitals. Within Egypt, the Hospitals and Convalescent Depots consisted of Nos. 1 to 12 Egyptian Detention (camp) Hospitals, No. 13 Egyptian Detention Hospital (formerly No. 1 Egyptian Stationary Hospital), while the Hospitals and Convalescent Depots of the Alexandria District consisted of Nos. 2 and 14 Egyptian Detention Hospitals (formerly No. 5 Egyptian Stationary Hospital).

Unfortunately, the precise role of Captain Iskander Abdo Agami in the EEF during this period is not recorded. According to his son, Dr. Georges Agami, Iskander Abdo Agami held the rank of Captain in the Egyptian Army's Royal Medical Corps in 1915, and was selected for service in the Egyptian contingent which accompanied General Allenby into Palestine. At that time, Egyptian military doctors still carried guns and were expected to fight when necessary. Only later was the Egyptian Army Medical Corps disarmed. Consequently, Captain Agami's status was the same as that of any other Egyptian officer, though also having a medical specialisation. In fact, he was known to be a good shot and a fine horseman. After the Great War was over, Captain Iskander Abdo Agami was awarded the same British campaign medals as his British or Imperial colleagues. Namely the 1914-15 Star, the 1914-18 Medal and the 1914-19 Medal. In addition, he was awarded the Egyptian Fu'ad I Sudan Medal (dated 1335 AH-1916 AD) with a bar with the name Aliabdinka in English and Arabic. The medal itself would have been given either because he was with the small unit of Egyptian Royal Medical Corps attached the Darfur Field Force against Sultan Ali Dinar of Darfur, or as a result of his service in the malarial Bahr al-Ghazal region of southern Sudan.

General Allenby's first assaults upon the strongly defended Ottoman positions ahead of the Palestinian town of Gaza failed on 26 March 1917 (First Battle of Gaza) and 17-18 April 1917 (Second Battle of Gaza). The Allied artillery bombardment in both these unsuccessful attacks was supported by the RFC Balloon Sections, some of which had ground handlers from the Egyptian Army. In fact, the ground handling of observation balloons not only required considerable training and discipline, but was also hazardous. Balloon sections were often close enough to the front line to be shelled by the enemy, and were regularly strafed by enemy aircraft. Beyond these hazards there were the same threats to health faced by all members



The greater part of the Egyptian Army remained stationed in the Sudan during the First World War, while its most visible activity in Egypt was in Cairo where Egyptian Army bands were a frequent sight. Unfortunately this resulted in unsympathetic observers dismissing the Egyptian Army as "chocolate soldiers" who were used primarily for parade purposes. (Fuad Kamal archive)

One of the many small detachment of Egyptian troops defending isolated outposts in the Western Desert against the possibility of further Sanussi incursions. In this case they are a unit of cavalry outside Kharga Oasis in 1916. (Egyptian Army Museum)

of the Egyptian Expeditionary Force, ranging from heatstroke, malaria, sand-fly fever, tropical ulcers, dysentery to typhus.

Other dangers came from the nature of the work itself. Hydrogen gas cylinders sometimes exploded. The fearsome Middle Eastern summer sun so heated the hydrogen gas with which the balloons were filled that this had to be vented much more often than was the case on the Western Front, otherwise the balloon would burst. This "rate of spillage" meant that British military supply depots, which were themselves short of both gas and transport, could rarely if ever keep up with demand from the Balloon Sections at the front. Furthermore, balloon fabric and cordage were frayed by desert dust, rotted by occasional humidity, and eaten by insects. Meanwhile, the lack of dramatic tactical success on the Middle Eastern fronts sapped morale, although this was more apparent among the British personnel than amongst the Egyptian ground handlers who, in any case, felt less individual commitment to the struggle than did the British.

Handling ropes whipped around in the wind while the balloon itself could be difficult to control in windy conditions. Iron discipline and team-work were vital. According to A. Morris, in his book *The Balloonatics*, in any breeze;

> the preparatory work resembled a wrestling match with a giant squid. The drill was precise and undeviating but was no safeguard against cold, fatigue and rain.... A slipping hand or foot could mean disaster for others in the team. Whistle commands predominated in ground handling, a sensible precaution in open country where words were carried away. The Balloon Alarm, the operational signal, was a long blast followed by a short one, 'let up' a short blast, and 'stop' a long one.... With the cable unattached there was not much beyond muscle to win a tug-o'-war with sudden wind. Should the crew fail they were powerless to save any friend who was slow-witted or over-conscientious ...

This could result in men being rapidly carried aloft to a height from which to let go the rope meant death or serious injury.

H.R.P. Collett was a British officer who served in the Balloon Wing attached to General Allenby's Egyptian Expeditionary Force, and he subsequently wrote a monograph based upon his diaries of this period. This unpublished text sheds a very interesting light on the role of the Egyptian Army in support of the Balloon Sections. He recounted that, on the afternoon of 10 September 1917 at al-Ballah, one-hundred and fifteen men of the Egyptian Labour Corps were detailed to his section for digging out a balloon-bed or sheltered location in which an inflated balloon would rest when not aloft. It was to be cut from the side of a cliff south of the Balloon Section's camp;

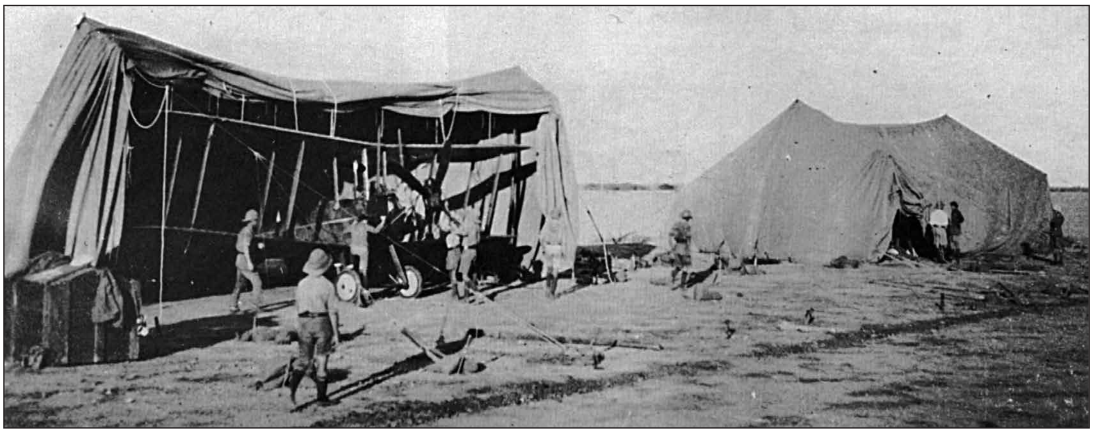
> It seemed, I remember, impossible to make these Egyptians hurry, or to 'get a move on', and yet, working with their own tools they must have shifted hundreds of tons of sand from the bed in a few days. They used a sort of short-hafted mattock instead of a

> spade, shovelling the sandy earth into soft rush baskets all in one movement until the basket was filled. There was a constant stream of them going to and fro with empty and full baskets all day, our own men working amongst them, to see that they did not dig beyond the marks stuck in the sand.

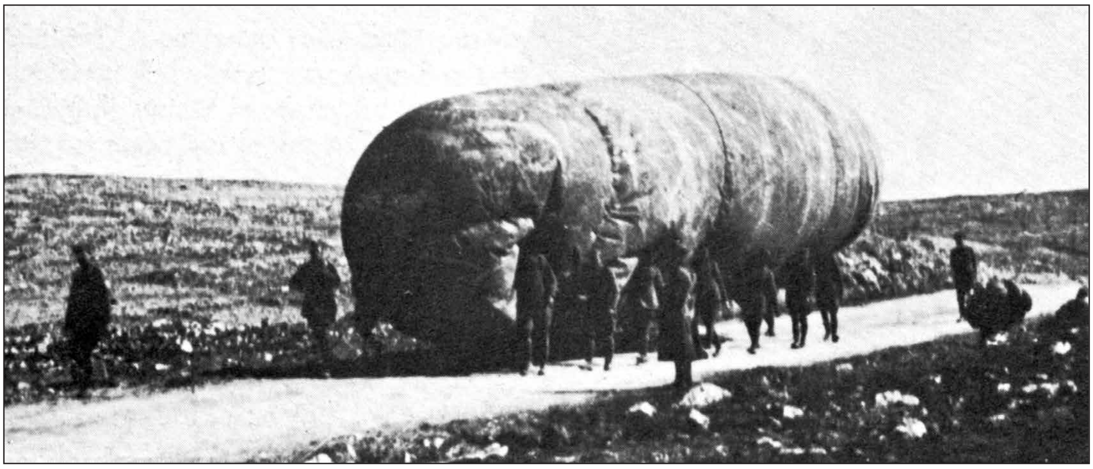
By the summer of 1917 the number of volunteers available for the Egyptian Labour Corps and Camel Transport Corps was running short of what was required, so in October the British insisted that the Egyptian authorities resort to the old corvée system of forcible enlistment based upon a ballot of young men.

Also in October 1917, the RFC's No. 49 and 50 Balloon Sections had Egyptian Army ground handlers attached. Most, it seems, were Sudanese from the Egyptian Camel Corps. Unfortunately they were still inexperienced when, late in October, one of No. 50 Section's balloons broke free. The observer parachuted to safety but, as Collett wrote;

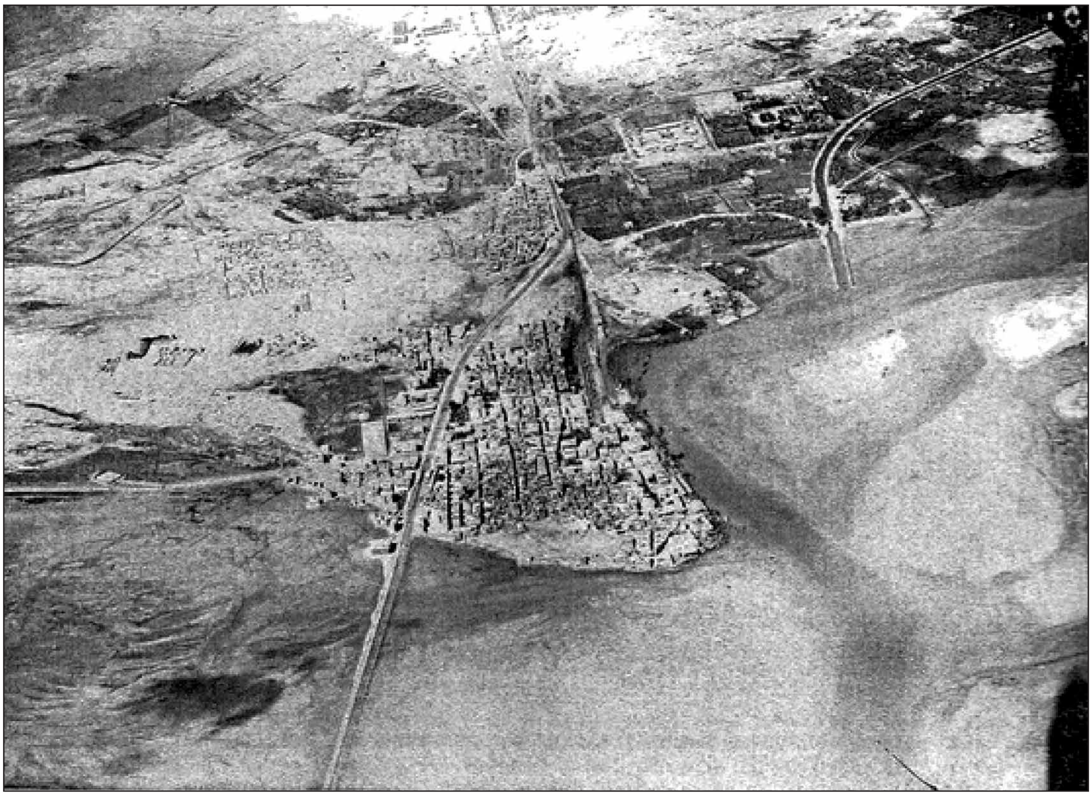
> I was going along the beach one day to relieve Burgess (another observer) in the basket (of the balloon), when suddenly on looking up at the sky I saw 50's (No. 50 Section) balloon evidently broken loose, for normally it was hidden by the cliff to anyone walking along the beach. Our Archies (anti-aircraft fire) had opened up on the gasbag for it was surrounded by their bursts. Higher it went and, when finally little more than a dot, disappeared into the clouds. Naturally we were all eagerness to know what had happened and who had been in the basket at the time. We received immediate order to 'bag down' our balloon owing to the gusty wind that had sprung up, and I was not sorry. On reaching our camp later we found out details of



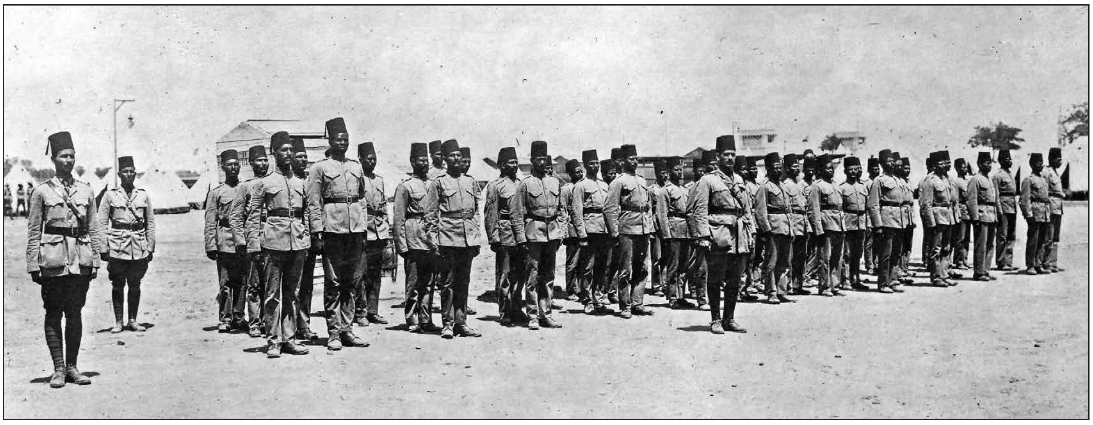
Portable canvas hangers used by the RFC outside the small Red Sea port of Rabigh in the Hijaz. They housed the BE2c aeroplanes of the RFC's Arabian Detachment, in reality C Flight of No. 14 Squadron. The aerodrome at Rabigh was also defenced by troops of the Egyptian Army. (Private collection, courtesy of Cross & Cockade International)



Men of No. 21 Balloon Company RFC moving an inflated gas supply balloon, otherwise known as a nurse balloon, on the road to Jerusalem in 1918. (H.R.P. Collett Archive)



The town of Suez and the southern entrance to the Suez Canal photographed by the German, and largely Bavarian, Flieger Abteilung 300 "Pasha" Squadron during the early part of the First World War. (Bayerisches Hautarchiv)



While the Egyptian Labour Corps (ELC) and Camel Transport Corps (CTC) largely comprised men forcibly enlisted through the traditional corvée system, the Egyptian Labour Corps Police consisted of experienced Egyptian Army reservists who had been recalled to the colours. One of their units is seen here at the ELC Base Depot in al-Qantara. (Egyptian Army Museum)

A Rais (literally "head") of a unit of the Egyptian Camel Transport Corps (CTC) near Shillal in Egypt, photographed on 17 August 1917. (Egyptian Army Museum)

> the mishap at 50 Section. It seemed that a sudden gust of wind hit the balloon when either just landing or going up. The Metallic V where the cable joins the rigging of the balloon, parted and the nose of the gasbag went up. The Balloon party were mostly men of the Egyptian Army, and were hardly proficient as yet in the handling of the balloon. This may have accounted for the fact that the balloon was not held and soared upwards rapidly minus the weight of the cable. Halbert (the observer), who had been transferred from us to 50 was in her at the time. After destroying maps and instruments he got out; the parachute opened normally, but on landing in a 40 mile (per hour) wind, he was dragged along the ground and had, I think, lost his knife for cutting himself free. Up to the brink of the wadi he was dragged, fell down to the bottom and hurt his back very badly, having to be taken to hospital where he remained for a long time. I was told afterwards that the Turks (later) were found having ground-sheets and tobacco pouches made of balloon-fabric, so the balloon came down in due course behind their lines probably of its own accord.

Before the start of the bombardment, which opened the Third Battle of Gaza on 27 October 1917, intensive aerial photography and balloon observation pinpointed 131 Ottoman artillery batteries. Meanwhile the process of sound ranging provided information about the calibre of the Ottoman guns in question. Once the British bombardment began, observation from aeroplanes and balloons, and the thunder of Allied artillery, including by naval ships offshore, was almost continuous. Between 27 October and 6 November, the RFC's two Balloon Sections observed for no less than one hundred and sixteen artillery shoots, only five of which were judged to have failed to destroy their targets. Most were carried out by British and Imperial Army artillery batteries while twenty-four were from the sea. The latter could involve the latest communications technology as, for example, when No. 49 Balloon Section had a direct telephone line to the Naval Signalling Station. This converted the balloon observer's messages into naval code which was signalled to the warship carrying out the shoot. For example, a bombardment of the Ottoman railhead at Bayt Hanun by two 6-inch guns at a range of almost 15 kilometres, targeted with the help of the balloon observers, caught the enemy by surprise.

British victory at the Third Battle of Gaza opened up the Palestine front in dramatic fashion. Beersheba was taken during the course of this battle and on 9 December General Allenby's army occupied Jerusalem. However, in the depth of a Levantine winter the British advance was hampered by the cold and wet, while bad roads and frequently deep mud took a heavy toll of the Egyptian Expeditionary Force's vital baggage animals. Fortunately, the arrival of 2,000 Egyptian donkeys and the establishment of the First Company of a new Donkey Transport Corps in the wake of the fall of Beersheba proved a huge help.

Appalling weather from December 1917 to February 1918 also hampered operations by the British RFC. No. 14 Squadron found it almost impossible to take off from its waterlogged aerodrome near Julis. However, Captain F.A. Bates and his pilots enlisted men from a nearby Egyptian Labour Corps battalion. They attached themselves to harnesses and dragged the aeroplanes to the top of a small hill at one end of the aerodrome. From here the pilots careered down the slope in a 'flying dive' to gain enough speed to lift off. During 1918 the number of Egyptian Labour Corps men in the EEF's Order of Battle rose from 74,252 to 134,971, providing labour for the newly formed British Royal Air Force (RAF), laying out signals and salvaging downed aeroplanes.

One of the British NCOs seconded to the Egyptian Camel Transport Corps, with ETC men checking camel pack saddles. (Egyptian Army Museum)

Egyptian camel handlers and their animals, probably of the CTC, bringing supplies to a new RFC airfield at Kilo 143, approximately fifteen kms west of al-Arish in February 1917. In the background is a BE2c. (Cross & Cockade International Archive)

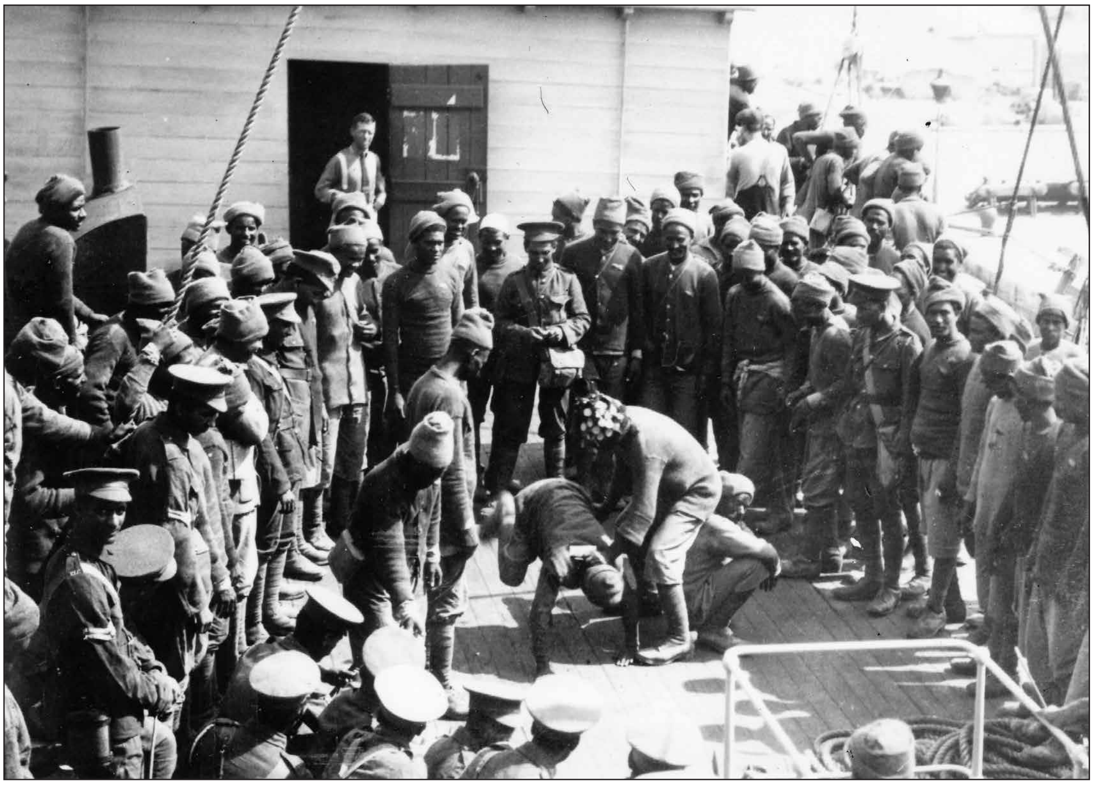
The balloon sections also had their own troubles, not so much from mud but from high wind, sometimes having to summon urgent help from the nearest infantry. Again, the Egyptian Labour Corps was called upon, usually to do the heaviest work. For example, at the end of 1917 when the balloon camp at Saris was being cleared, H.R.P. Collett saw one of these men carrying a deflated nurse balloon, which formed part of the Balloon Section's gas holding system, all on his own. It was rolled "like a monstrous snake" and normally took 40 British soldiers under two officers to carry it. The Egyptian carried the nurse balloon about 200 metres, "over the roughest country imaginable…. and he did not seem unduly distressed when he put down his load". Only a few weeks later Egyptian Sudanese troops helped construct a new balloon camp for Collett's Section by doing most of the digging.

The British advance continued, with the capture of Jericho between 19-21 February 1918. Three days later Egyptian Army soldiers under a British officer were again recorded helping the 'balloonatics' who were currently based at Attara;

> On 24th February Swan and Hunter (Collett's colleagues) went down the line to re-join their Section in Egypt, their places being taken by Briggs and Wrapson. In addition to them a detachment of about sixty rank and file of the Egyptian Army, with two native officers under the command of Bimbashi Irwin were attached to the section for duty. The reason for this was that, when trained, these E.A. (Egyptian Army) men were to take the place of our own balloon party – i.e. the men who actually handle the balloon in taking it in and out of the bed or holding it down during the changing of observers. The British Balloon party were then to be sent down to the base and re-mustered to other employment. Taking into account the fact that when the balloon was manoeuvred about on the ground all words of command were given in English it was remarkable the speed with which these Sudanese picked up the drill, though for a while they were supervised by the Bimbashi (Irwin).

Bimbashi Irwin of the Egyptian Army featured prominently in Collett's unpublished monograph. He was a man of many talents, and something of a character, as Collett recalled;

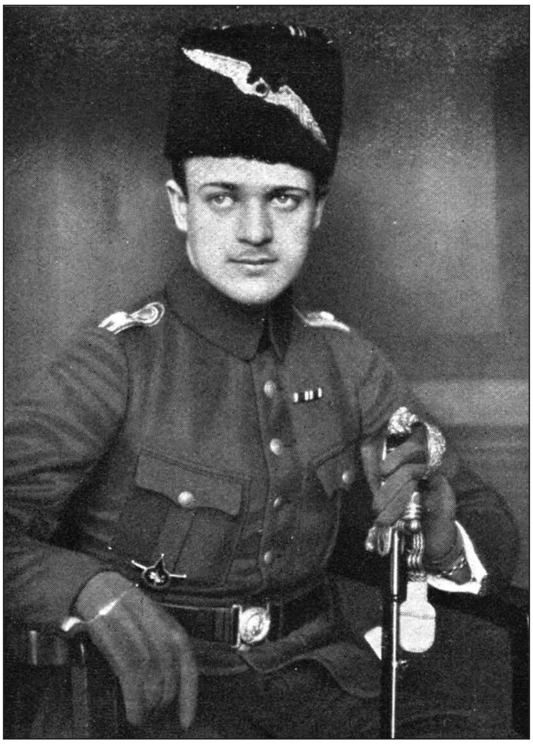
> On the evening of the 9th March (1918) when Briggs returned from Bethlehem, where he had spent part of the day, he and I went up to Smith's 'Archie' (anti-aircraft) Battery (near Attara) for dinner. When we got there, we found that 'Bim' Irwin had arrived before us. After dinner Briggs asked if we might see their wireless transmitting set and Smith readily took us out to see it. The wireless was in charge of some Australians who were quite ready (when someone suggested it) to send an offensive message to the Germans in order that we might see the apparatus at work. 'Bim' Irwin wrote out a message in German and it was sent out three times but no answer was forthcoming while we waited.



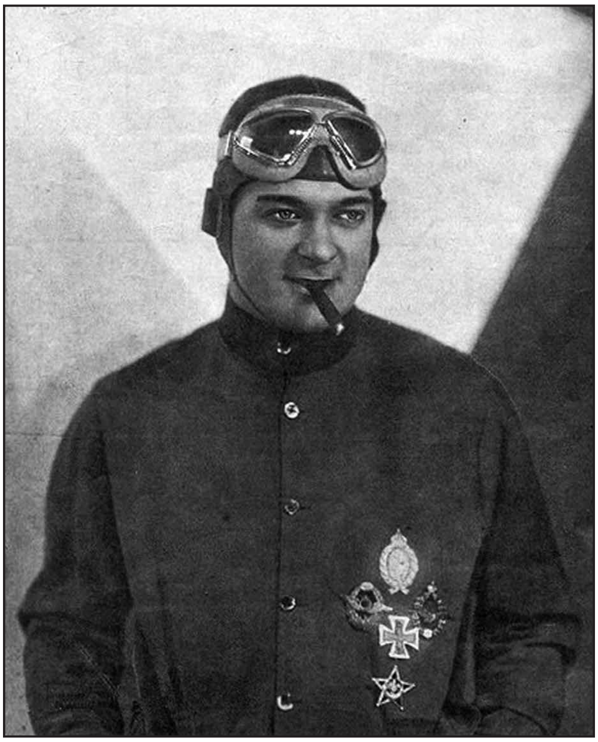
Men of the Egyptian Labour Corps entertaining their fellows and some British troops with acrobatics aboard a troop transport ship during the First World War. (Egyptian Army Museum)

The Egyptian Army ground handlers occasionally came under fire, one such occasion being on 21 March, as again described by Collett;

> At 8 in the morning I went down to the balloon bed with the Egyptian men to bring the now completed balloon out of the wadi along a track on to the road that the winch was to run on. No sooner had we got down there when the Turks started shelling. H.E. (high explosive) and shrapnel passed well over us, for we did not hear the burst, but I got on the phone to the camp and learned that they were landing on the road just beyond the camp where we were going to work from. Meanwhile, I was told to stand by for further orders. I waited for some minutes after the last shell had gone over, and then had the balloon walked out on to the track, when it was eventually brought to the winch, attached and let up in ballast. Nothing happened, and the balloon behaved normally it was hauled down for Captain Lee to get in. No sooner was the balloon near the ground, that the Turks started shelling again, and pretty good shooting they made, for we were in dead ground (as seen) from any part of their line, and as far as we knew no planes were observing for them. The balloon was hurriedly let up, the winch taken back towards Hadrah and the bulk of the Section, most of whom were present, hastily scattered, availing themselves of tiny wadis and holes to take cover. Several dozen shells came over, the shrapnel bursting in front, behind and over us, but not one single man was so much as touched, and there

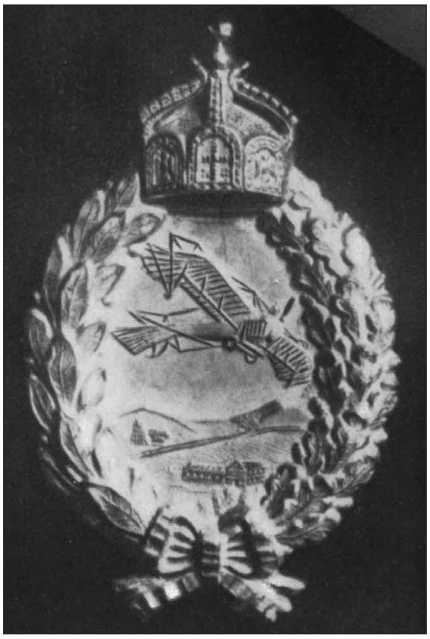


Egyptian Prince Abbas Halim in the uniform of a Mülazımıevvel or First Lieutenant in the Ottoman Army flying corps, but without a badge which would indicate that he had qualified as a pilot or observer. (Universum-Jahrbuch Weltrundschau, issue 21 of 11 June 1917)



A portrait photograph of Prince Abbas Halim in flying gear with his German and Ottoman decorations, plus German, Austro-Hungarian and Ottoman pilot's badges. (Published in an Egyptian news magazine on 4 July 1934)

Prince Abbas Halim in the uniform of the Ottoman Army's flying service with another Ottoman officer wearing an Arab kafiya head-cloth, probably photographed in Syria. (Nour Bardai archive)



A closer view of the badge awarded to a qualified pilot of the Imperial German Luftstreitkrafte. (Heinz Nowarra archive)

The band of the 1st Egyptian Infantry Battalion, attached to the Palestine Lines of Communication division of Gen. Allenby's Egyptian Expeditionary Force, marching across the Haram al-Sharif (Temple Mount) in Jerusalem on 12 April 1918. They are followed by members of the ex-Ottoman Palestine Gendarmerie; probably those who had been attached to the Egyptian Army after the British and their allies seized control of Palestine. (Egyptian Army Museum)

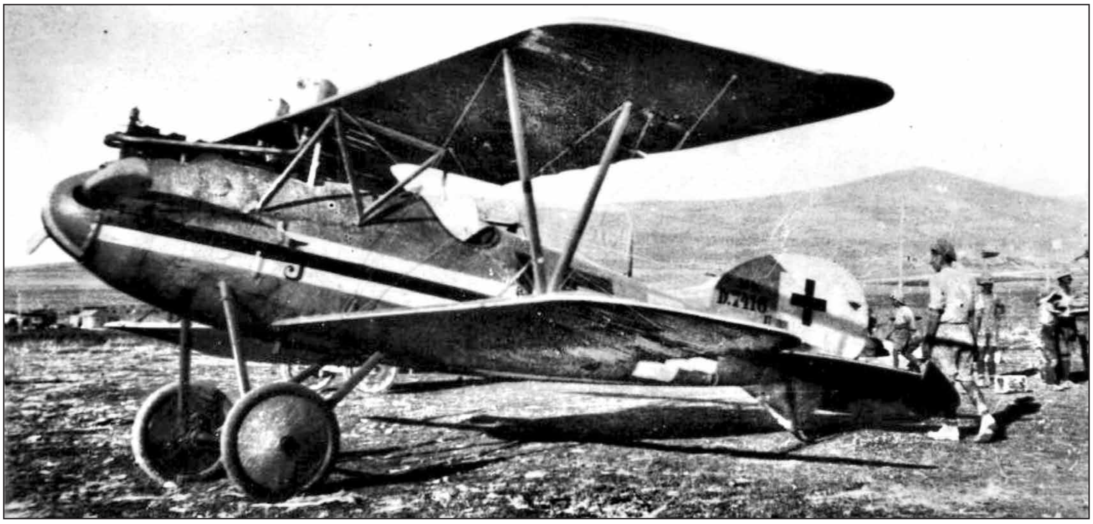
Men the 1st Egyptian Infantry Battalion, having removed their shoes, waiting to enter the al-Aqsa Mosque in Jerusalem in order to pray on 12 April 1918. (Egyptian Army Museum)

> were nearly one hundred and fifty of us out there at the time. One shell burst on the ground just in front of the winch having just missed the cable. Eventually, by wasting not a moment we got the balloon down and up again with Lee on board, the Turks meanwhile holding their fire. As it grew dark, Lee decided to bag down the balloon well to the west of its bed, and no sooner was it detached from the cable than more shrapnel came over, the bullets plastering the spot where the balloon had been less than a couple of minutes previously. Dodging about with a balloon in the dark in unknown country alive with pits and unsuspected wadis, is not the form of exercise or amusement that appeals to me most. At last, however, a place was found where the balloon could be left safely over-night until a fresh bed was made for it. The next morning, first thing, Lee and I went off to hunt for a likely spot for the new bed within easy reach of the track, for the winch was too heavy to take off the track on to virgin soil, into which it would have sunk forthwith. A spot was found and most of that day spent by the men preparing the surface and fixing screw pickets etc., by night the balloon was securely bagged down in it.

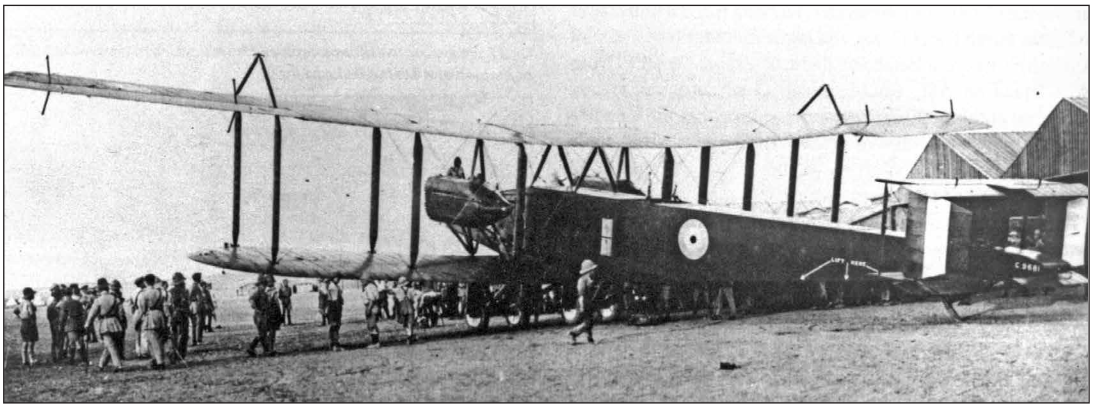
Between 21-30 March 1918 the first British attempt to cross the river Jordan and link up with the Arab Northern Army failed. Collett's Balloon Section had a quieter though not uneventful time, being surprised to find an Alderney cow picketed near their ponies. Such a fine European milking animal must surely have come from one of the nearby Zionist settlements. Two of the Egyptian Army's Sudanese claimed to have found it, supposedly wandering around attended by a small Arab boy aged about seven. So, the Egyptian soldiers brought it into camp "for safety". As Collett explained;

> Fresh milk appealed to us vastly after so many months of tinned milk, so perhaps rashly, we had it with our tea and coffee and were none the worse. Two days later, two of the mounted military police arrived in camp to remove the cow, as its owner had

Col. Sir Ronald Storrs, the British Military Governor of Jerusalem, greeting officers of the 1st Egyptian Infantry Battalion, Palestine Lines of Communication, on the Haram al-Sharif in Jerusalem on 12 April 1918. (Egyptian Army Museum)



An Albatros D.V/Va (number D.7416/17) captured when the German aerodrome at al-Afula was overrun by rapidly advancing Allied troops on 19 September 1918. The Allied advance was so sudden that the personnel and four unserviceable aircraft of FA 304(b) or FA 304 were captured along with the Commanding Officer, Maj. Walz (or Weeltz). He had only just landed following a reconnaissance sortie in an Albatros scout and this may have been his machine. (Private collection)



British troops and locals, including at least two Egyptian Army officers, looking at a Handley Page 0/400, serial number C9681 of the RAF. It had landed at Abu Qir on 7 August 1918, before the final stage of its flight from England to Cairo. Known as "Biffy Borton's Bomber", this aeroplane was flown by Brig. Gen. A.E. Borton, Major ASC A. Maclaren, Sgt. Goldfinch and Air Mechanic Francis, plus Maclaren's dog Tiny. (Courtesy of Cross & Cockade International)

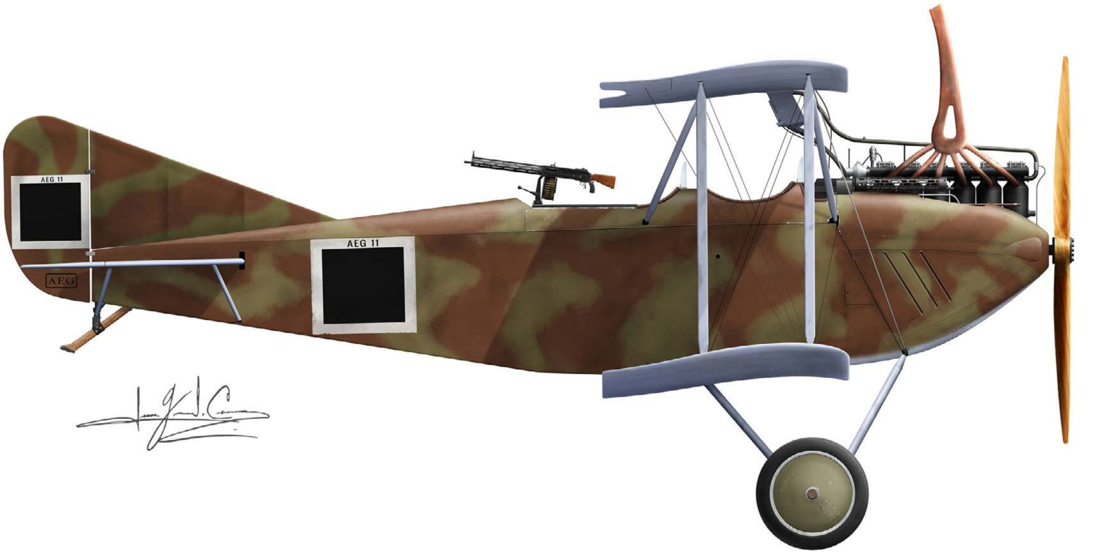
> reported its loss to the APM (Army Provost Marshal) at Corps H.Q. They took the cow with them, and the small boy, though they viewed the journey to Jaffa with evident distaste, shared, I think, by the cow, who resented an improvised halter.

Between 30 April and 4 May a second British attempt across the Jordan again failed. Just over a week after this further setback, Collett of No. 49 Section left for very welcome leave in Cairo, along with a British Egyptian officer. According to Collett's remarkable monograph;

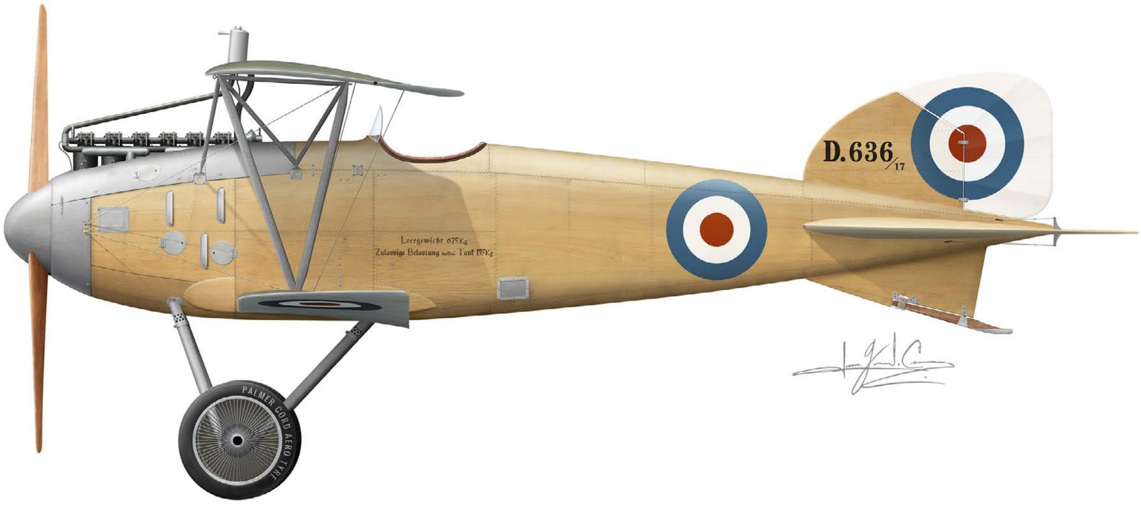
> On my return to camp on the 11th May, I heard that Sheffield (a British officer) was coming back to the Section for duty, and that 'Canada' (the nickname of another of Collett's colleagues) was coming on leave with me and Bimbashi Warne of 50 Section. 'Bim' Warne and I set off by an afternoon train on the 13th from Ludd (Lydda), where the railhead now was, and got off at Gaza, where we had an excellent meal in the Y.M.C.A. tent. Later we caught the leave train for Qantara, arriving next morning in Cairo in time for late lunch. That afternoon I went down to the Balloon School at Zaytoun (Zaitun) and saw Preston, St. Clair and Helbert, whom I was very pleased to see up and about again, apparently little the worse for his fall the previous summer. St. Clair came back to Cairo with me to see 'Bim' Warne and we all had dinner together at Shepheard's (the famous hotel on the bank of the Nile in Cairo), where we were putting up for the night.

The entertainment organised for Egyptian and Sudanese troops was rather different from that enjoyed by Collett and his friends in Cairo. He himself was soon back at the front and described the Section sports organised by his colleague 'Canada' on 5 July. "They took the form of 'Trade Sports', – thus the telephonists had to run so far, cut and re-join a piece of cable. A piece of balloon fabric was torn and had to be sewn and patched by the riggers, and so on. The Sudanese did some section and arms drill, competing in platoons against each other". Military drill was apparently the Sudanese and Egyptian soldiers' idea of fun.

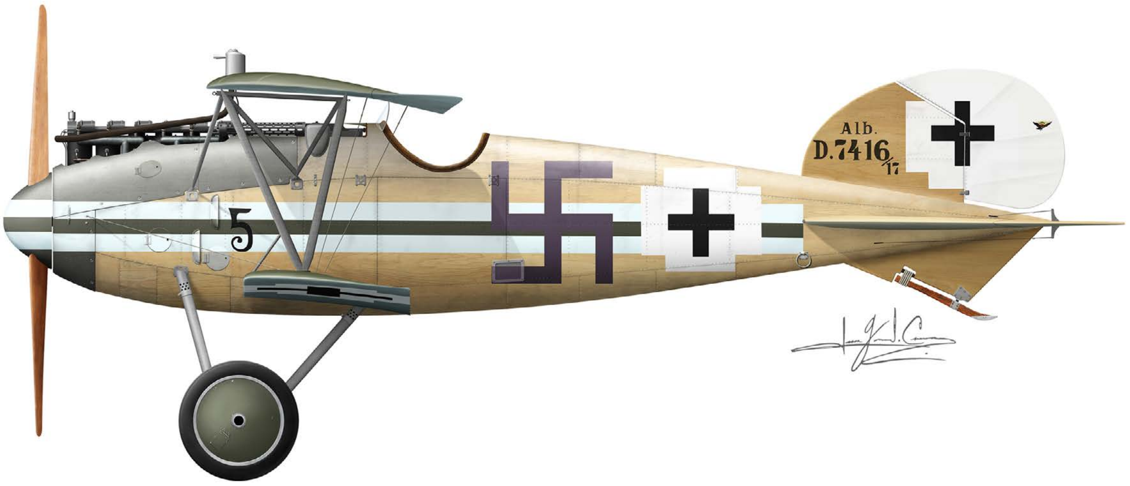
An Ottoman counter-attack was defeated at Abu Tillul on 14 July. However, the front remained relatively unchanged during the blistering Palestinian summer. The British were preparing for the massive autumn offensive which would finally smash the Ottoman defences in this theatre. The most importance task allocated to the Egyptian Labour Corps during the summer months was in the marshes in the Jordan valley and Ghur area, either draining marshes or covering them with oil to kill the mosquitos and thus make military operations possible in these areas.



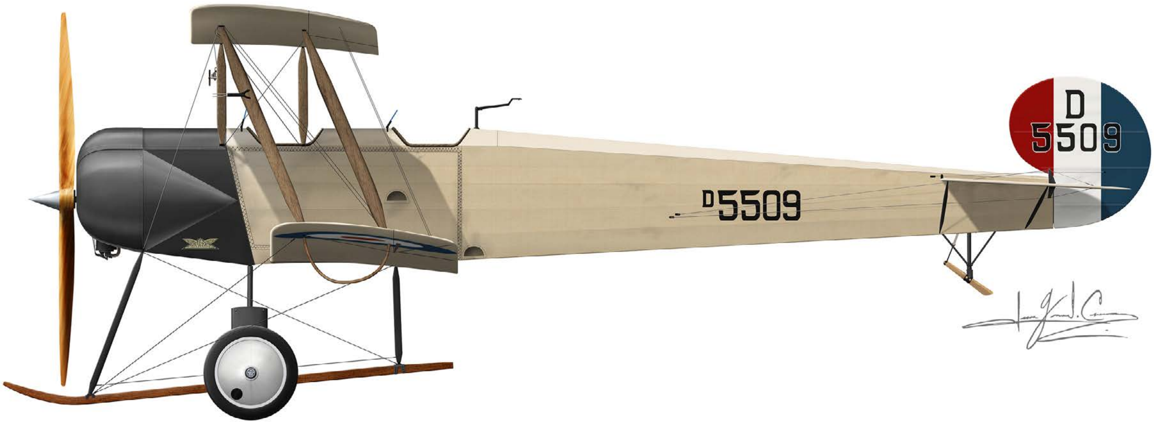
This AEG C.IV had originally been given the German number C.7071/17, this being replaced with the number AEG 11 after the aeroplane was transferred to the Ottoman air service in November 1917. Apparently intended for the Ottoman 13th (ex-12th) Bölük or squadron attached to the Ottoman Army's 13th Corps in Iran, AEG C.IV number AEG 11 was either returned to the 6th Army Aircraft Park outside Mosul in December or never went to Iran. Later it clearly formed part of the 13th Bölük at Kifri, in what is now northern Iraq, in 1918. (Artwork by Luca Canossa)



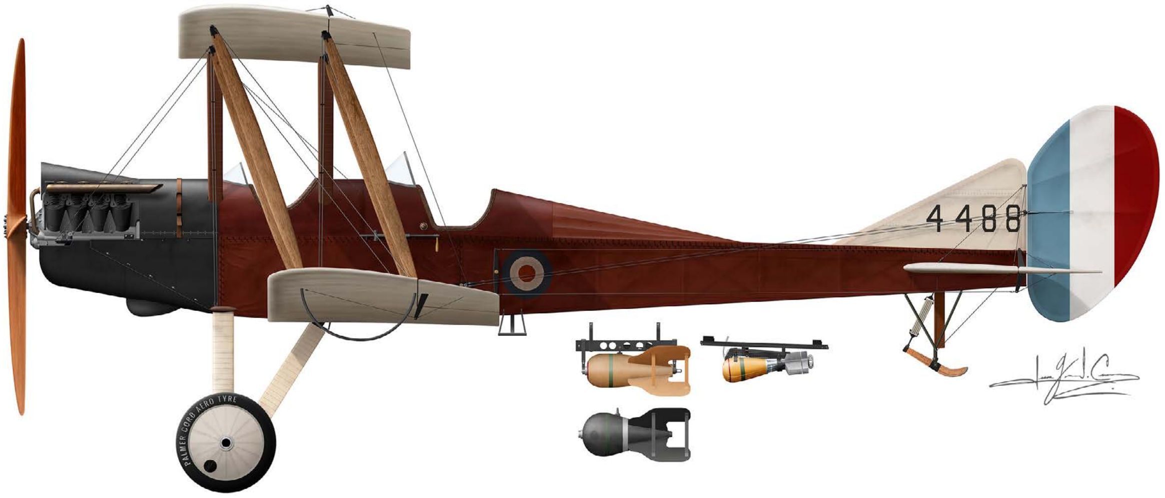
Displaying captured but intact enemy aeroplanes was one way in which all sides sought to bolster domestic morale and, in the case of the British Empire, to convince subject peoples that Britain was winning the Great War. One of the enemy machines which the British displayed in Cairo was Albatros D.III, number D.636/17. It had been flown by Oblt. Ditmar of FA.300, a German Pasha Squadron supporting the Ottoman Army in southern Palestine, but was forced down with a damaged radiator in September 1917. After being repaired by the British, its guns removed and given unorthodox British national markings, Dittmar's Albatros D.III was tested by the RFC before being put on display alongside other downed enemy aeroplanes in the Egyptian capital. Note that the fabric covers of the left wheel had been removed whilst those on the right remained. (Artwork by Luca Canossa)



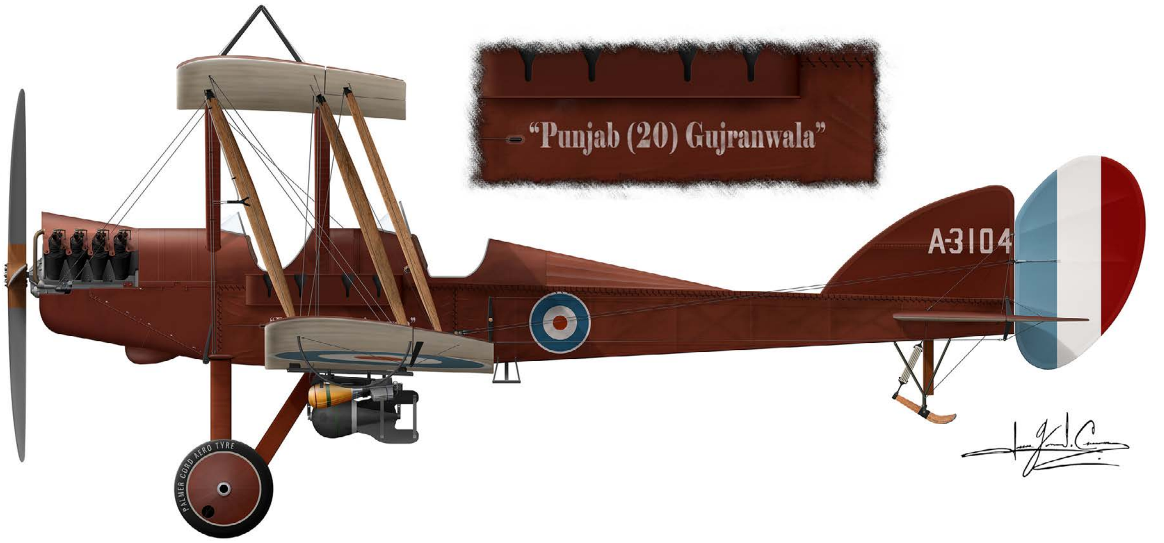
Albatros D.V serial number Alb. D.7416/17 was one of the abandoned aeroplanes of the German Pasha squadrons which the Australian Light Horse captured at al-Afulah in Palestine after the Third Battle of Gaza. Having formed part of the arsenal of FA 304b, it could not be withdrawn due a shortage of fuel and spares. These aeroplanes were then secured by Egyptian troops, to prevent them being damaged by souvenir hunters. Albatros D.Vs had originally been delivered without additional short struts at the base of their main V-shaped inter-plane struts but after wing vibration caused two to crash, the surviving machines had the short struts added, thus bringing them up to D.Va standard. (Artwork by Luca Canossa)



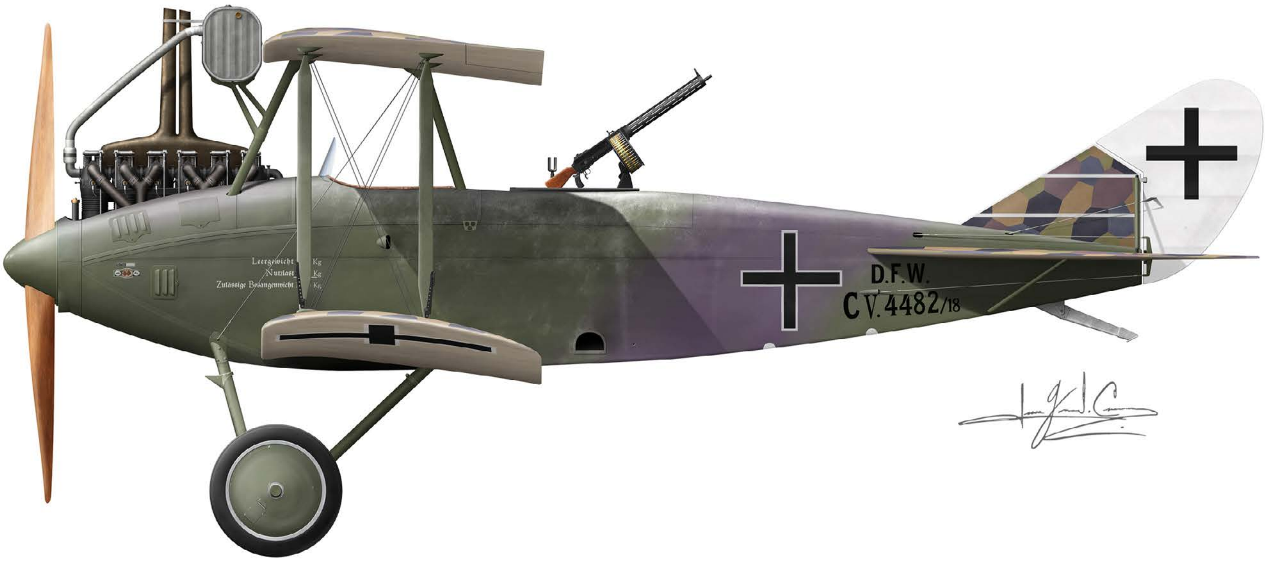
The Eastern Aircraft Factory which the British established at Abu Qir, east of Alexandria in Egypt, in 1918 assembled several aeroplanes before an armistice brought the war against the Ottoman Empire to a close. One of these was an Avro 504J, number D5509. Although it is understood to have been used by the recently formed RAF as a training machine, confused British records during this time of transition suggests that the number D5509 was never officially allocated. The purpose of the multi-angled object mounted on top of the fuselage immediately behind the rear cockpit is unclear. (Artwork by Luca Canossa)



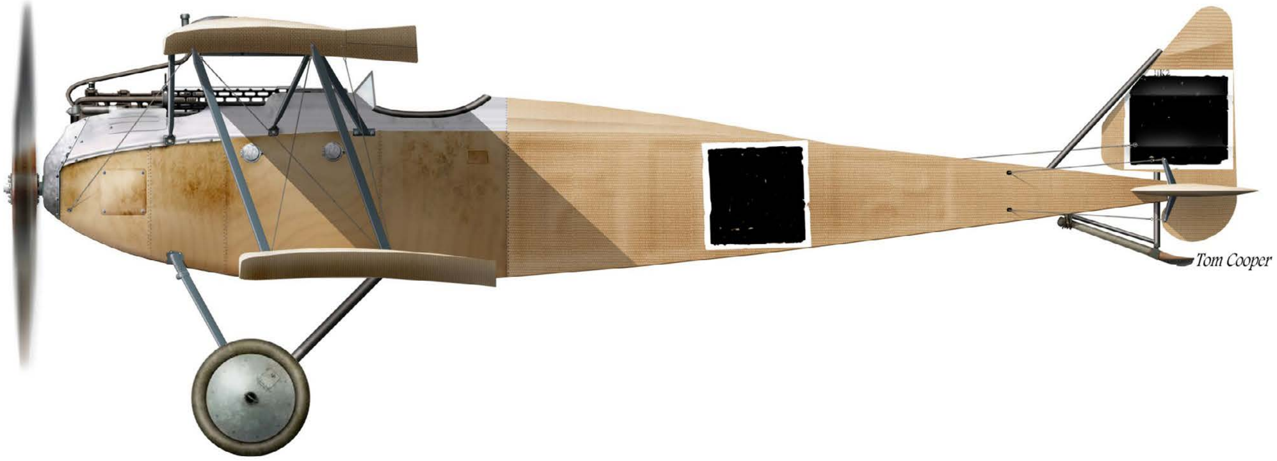
After the British RFC painted most of its aeroplanes with camouflage dope instead of the earlier clear dope, two main colours appeared with dark green PC 10 being used on European fronts. The reddish-brown PC 12 was used in the Middle East but often seems to have faded in harsh sunlight. This BE2c, number 4488, was used by C Flight of No. 14 Squadron in the Hijaz during 1916-17. It nevertheless still has clear doped wings, tailfin, tail-plane, elevators and wheel covers. The vertical exhaust stacks were removed, presumably to avoid overheating, as were guns and gun-mountings to lighten the machine in the hot air of the Arabian Peninsula. The aeroplane's only offensive capability was the various weights of bombs which it could carry. (Artwork by Luca Canossa)



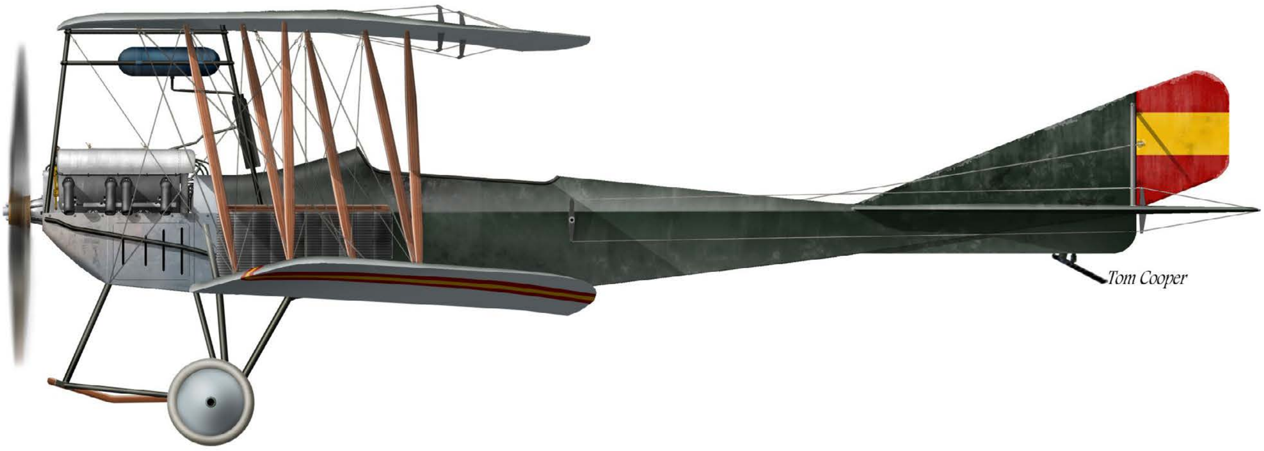
No. 114 Sq. was formed in September 1917 when part of No. 31 Sq. was sent from India to Aden with six BE2e aeroplanes. Of these, two were presentation machines, number A3104 having the name "Punjab (20) Gujranwala" on its fuselage (obscured by the lower wing in the main picture). A3104 had already served in East Africa and would be damaged during a take-off accident on 23 April 1918 while flown by Lt. L.J. Mann and Lt. Sacre. The vertical exhaust stacks had again been removed, the exhaust pipes were also shortened, and it carried no guns because the Ottoman enemy possessed no aeroplanes in Yemen. BE2e number A3104 nevertheless did have racks for small bombs beneath its wings, plus a bomb-carrying bar for a larger bomb beneath the fuselage. (Artwork by Luca Canossa)



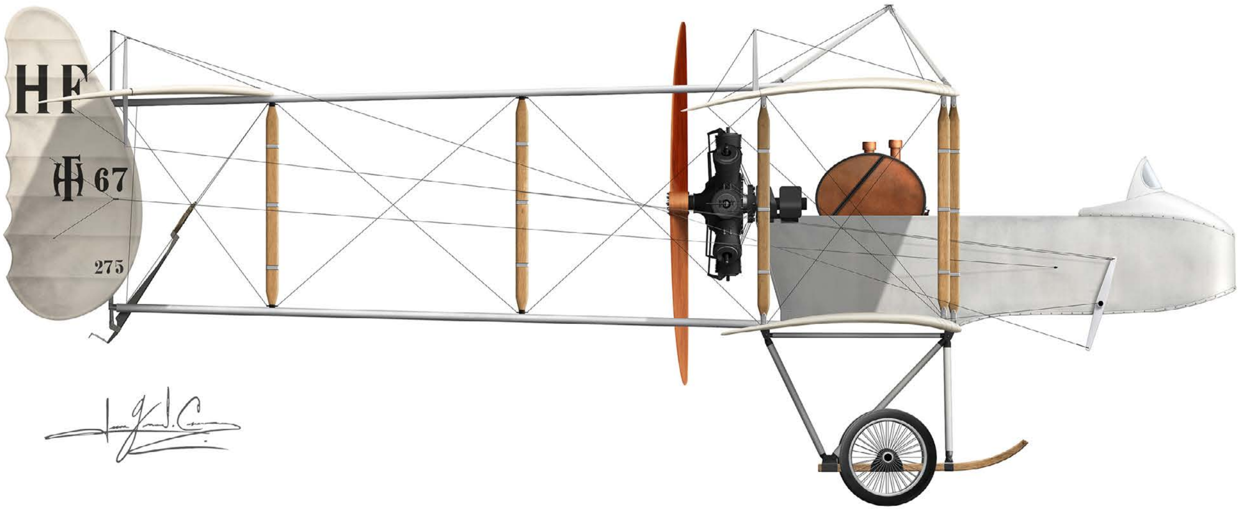
This DFW C.V number CV. 4482/18 formed part of the strength of FA 301, one of the German Pasha squadrons in Palestine. It was a late production model with new style German markings, plus printed hexagon camouflage fabric on the upper surfaces of the wings, tail-plane and fin, but not on the fuselage. Many German aeroplanes which served in the Middle East, either in the Pasha squadrons or in the Ottoman air arms, had enhanced cooling systems. In the DFW C.V this consisted of a much larger box radiator with a different system of water-pipes mounted on the front of the upper wing, whereas on single-seater Albatros scouts it usually took the form of doubled flush radiators in the upper wings. (Artwork by Luca Canossa)



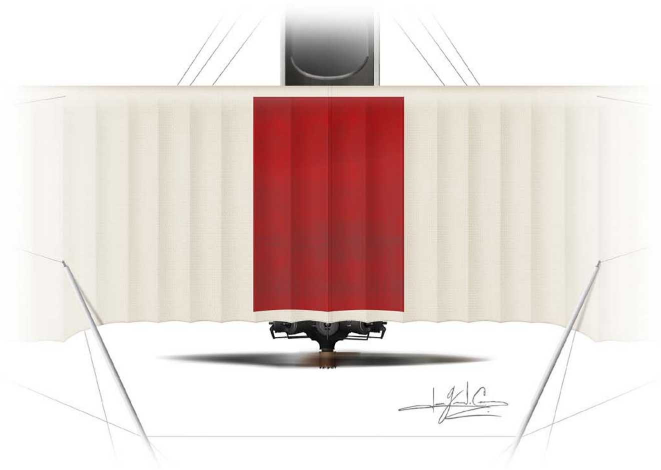
On 3 April 1917, while flying a Halberstadt DV from the Mosul Aircraft Park to his squadron, German pilot Lt. Schüz of the Ottoman 2nd Bölük collided with one of the enemy machines he was attempting to shoot down. Both aeroplanes survived, the British BE2c being repaired and transferred to No. 31 Sq. RFC in India. A photograph of the damaged Halberstadt D.V is too blurred to identify its serial number, but it was probably HK 2 (c/n 262, ex-German serial 2315/16 or 2315/17), which was returned to Mosul Aircraft Park for repair and may have remained there. Halberstadt D.V numbers HK 3 and HK 6 were not mentioned in the Mosul Aircraft Park, but were accepted by the 2nd Bölük in April 1917, while the next Halberstadts to be allocated to this squadron did not reach the Ottoman Empire until December. (Artwork by Tom Cooper)



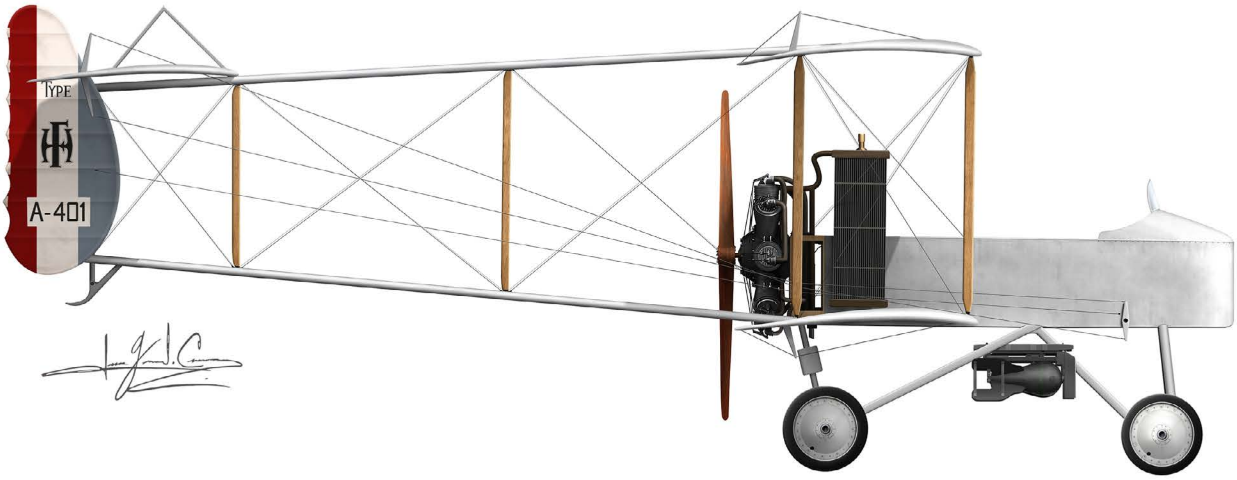
The Barrón Flecha looked very like the Lohner B.1 Pfeilflieger on which it was based. However Eduardo Barrón incorporated several improvements drawn from experience against "Rifian rebels" in Spain's Protectorate in northern Morocco, including a strengthened undercarriage. Most important, however, was the instillation of a Spanish engine, the eight-cylinder Hispano Suiza 140 CV2 (Type 31). Flechas were also painted a dark olive green, unlike the light grey Pfeilfliegers, and had the Spanish national colours as stripes beneath their wings, rather than as roundels. (Artwork by Tom Cooper)



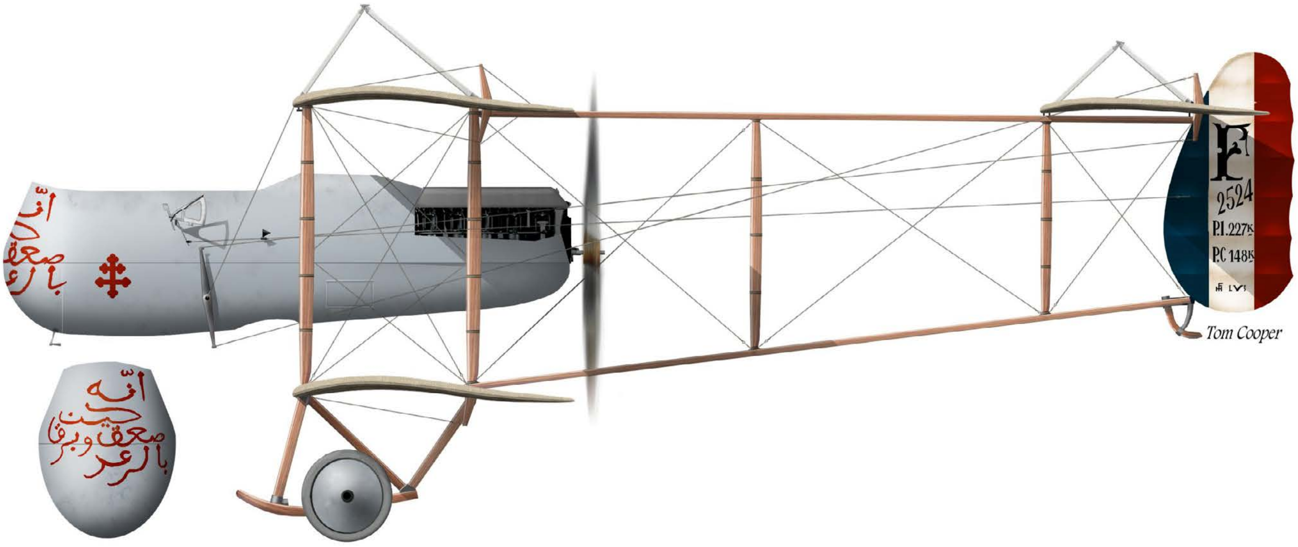
In May 1914 the Henri Farman HF 20 aeroplanes of the French Sahara Squadron carried out an ambitious flight from Tunis to Wajda (Oudja) and back, across mountain, salt-flats and sandy desert. Some had large rectangles, probably red, painted in the middle of their upper wings, including number 67 (construction number 275). These panels were probably to make the aeroplane more visible in case of an emergency landing. Not all completed their journey, number 67 reaching Wajda but only getting as far as al-Kheiter on the return journey. Two months later the French government decided to bring this unit back to France, a movement which would be urgently accelerated on the outbreak of war between France and Germany on 3 August 1914. (Artwork by Luca Canossa)



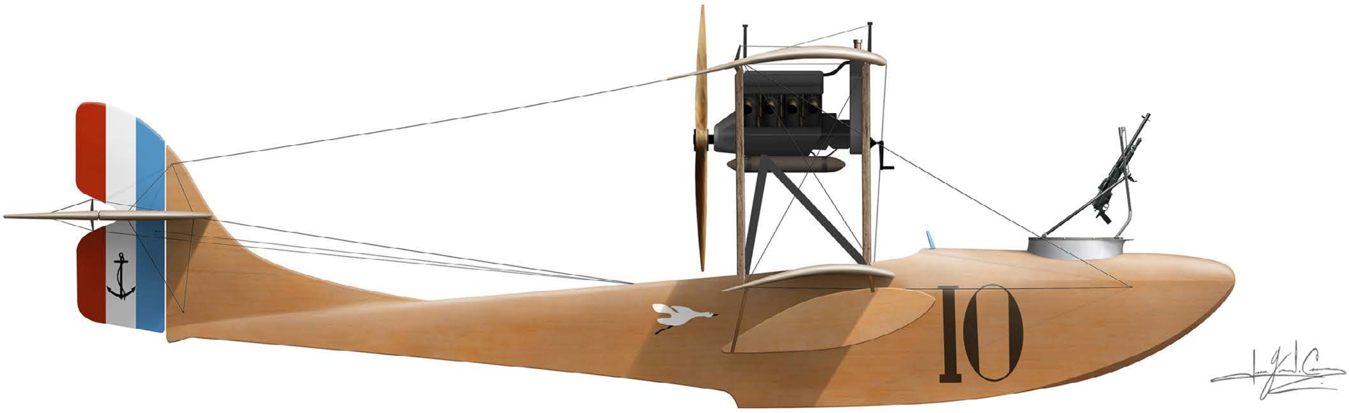
Mid-section of the upper wing of the Henri Farman HF 20 aeroplane, showing the size and form in which the red rectangle was applied to aid the identification of the aircraft in the case of an emergency. (Artwork by Luca Canossa)



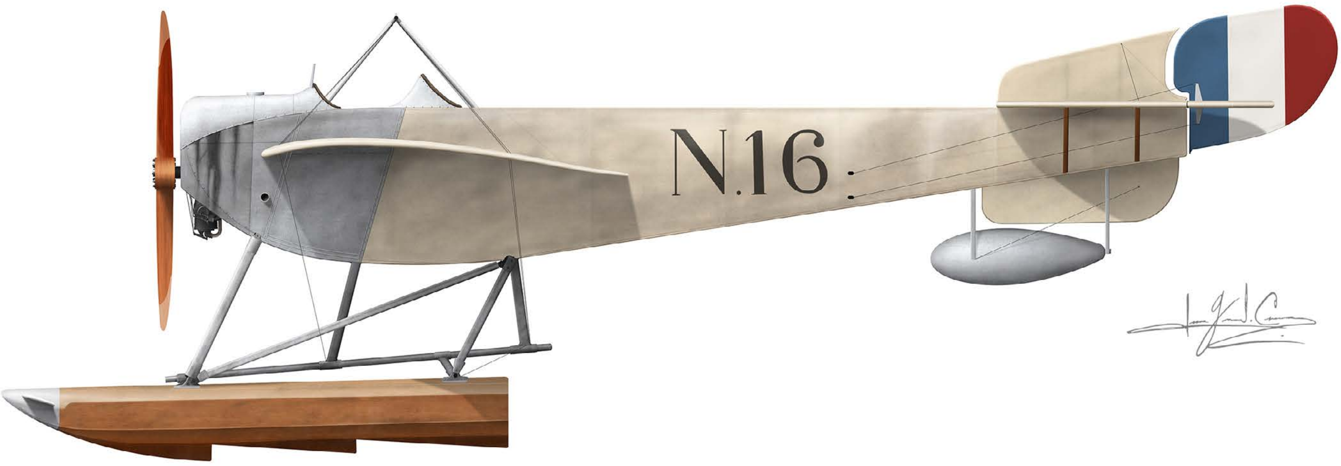
This Henri Farman F.27, number A-401, formed part of the Aden Flight of RFC No. 114 Squadron in 1917-18, having previously been part of No. 31 Sq. in India. It seems to have had no visible serial numbers while in India, though these were added either before or during their service in Aden. On 23 January 1918 the crew of A-401 attempted to assist another Henri Farman F.27 (number A-404) which had been shot down by Ottoman soldiers or their Yemeni allies, but was itself hit, pilot Second Lt. J.S. Owden being wounded. He and his observer, Second Lt. L.J. Mann, managed to make an emergency landing, but tore off the Farman's undercarriage in the process. (Artwork by Luca Canossa)



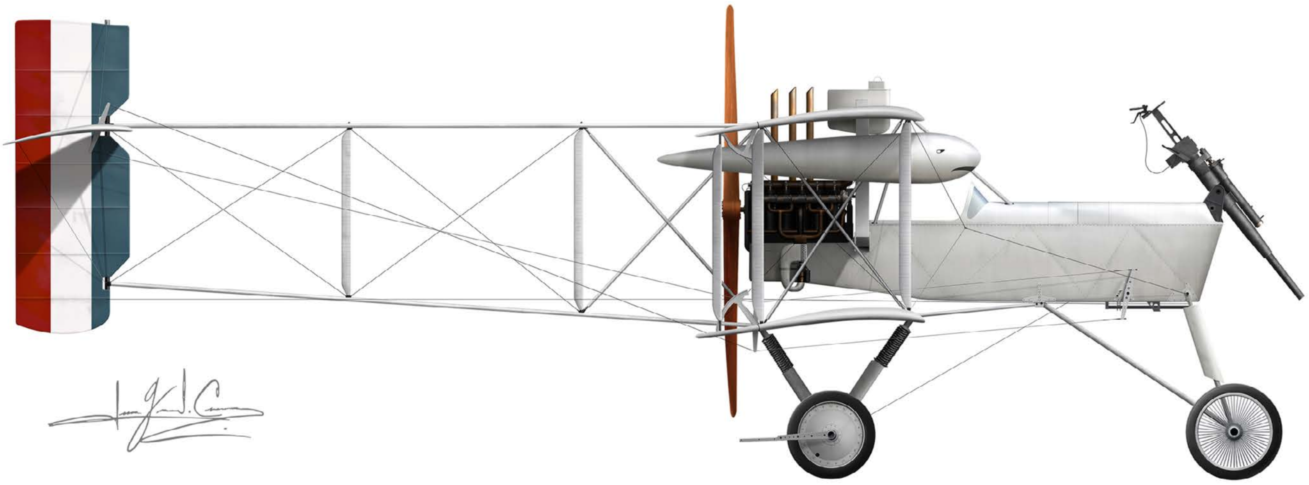
The Farman F 40s of Escadrille F 301 in southern Tunisia in 1916-17 had originally been intended for coastal patrol, looking for enemy submarines. However, they were soon engaged against Arab and Berber dissidents operating out of western Libya where Italian forces were still largely confined to an enclave around Tripoli. At least six of the escadrille's Farmans had warlike phrases written in large but crude Arabic script on the fronts of their nacelles. Their colour appears to have been either red or black. Perhaps the Farmans were expected to operate at such low altitude that these words could be read from the ground. The serial number of the aeroplane shown here remains uncertain. (Artwork by Tom Cooper)



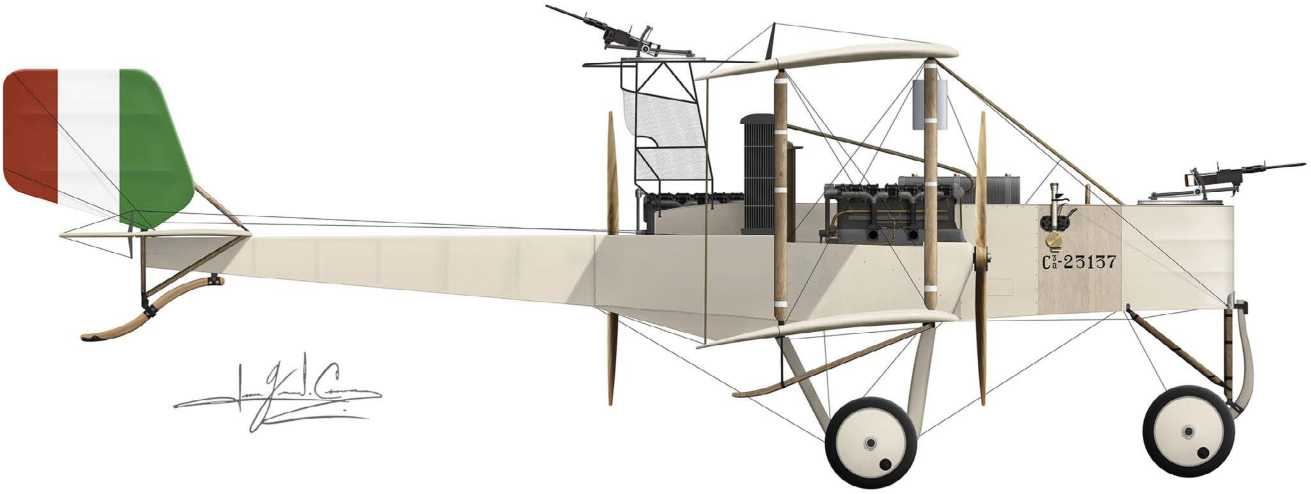
This Donnet-Denhaut D.D.2 150hp flying boat, individual identification code or pennon number Q.10, of the French Naval Aviation Service, was based at Annaba (Bône) in Algeria in 1918. Its primary armament consisted of anti-submarine bombs, though it also carried a Hotchkiss machinegun on a Nieuport T.O.1 or T.O.1bis ring mounting in the front cockpit. A white seabird motif was painted on the hull of at least one Donnet-Denhaut D.D.2 150hp of a neighbouring unit at Arzyu (Arzew), though that machine's pennon number is unknown. (Artwork by Luca Canossa)



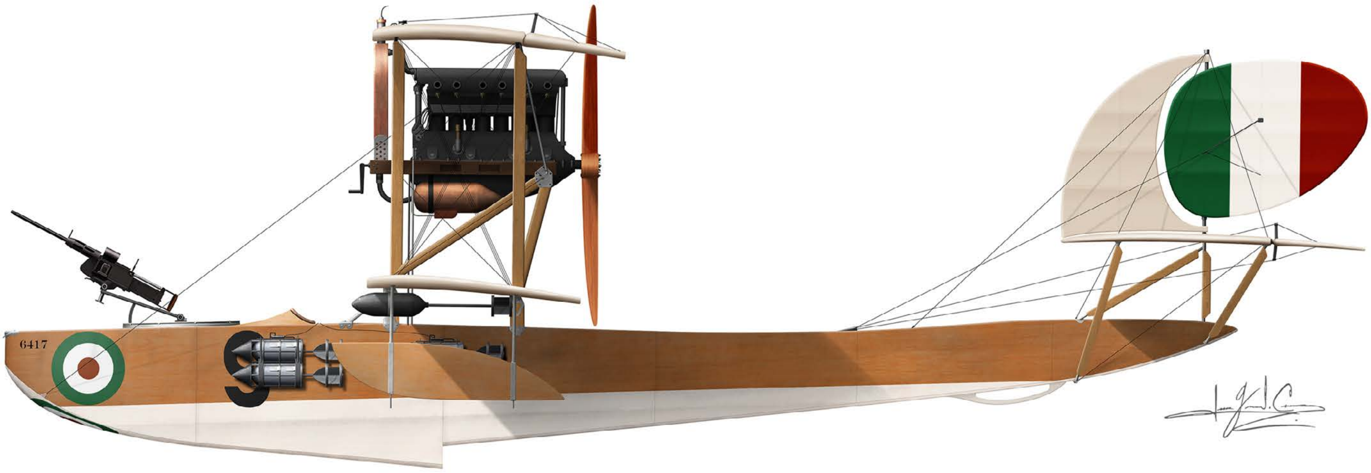
A Nieuport VI H number N16, originally built for the Ottoman Navy but supplied to the French Navy at the outbreak of the Great War. It has French roundels only beneath its wings, plus rudder stripes without the black anchor seen on later French naval aeroplanes. There were several versions of the Nieuport VI seaplane, but this 80hp Clerget engine version is distinguished by a four-strut, pyramid-shaped cabane for the wing supporting wires, cockpits separated by a raised fairing, and a rudder whose lower line is the same as that of the bottom of the fuselage. The main floats have metal-covered tips plus pairs of small hydrovanes to prevent the aeroplane nosing forward when landing. This machine served in in Egypt during 1914-15, initially against Ottoman forces attempting to assault the Suez Canal. (Artwork by Luca Canossa)



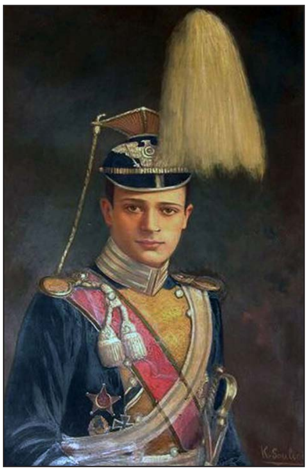
A Voisin LBP VIII Cannon of Escadrille G 489, so numbered because it flew both Caudron G.4 and Voisin 8 Ca2 LBP (also known as the Voisin LBP VIII Cannon) machines. Based at Mazagan – now al-Jadida – on Morocco's Atlantic coast in October-November 1918, they were armed with 37mm Hotchkiss quick-firing cannon which could pierce the conning tower and perhaps even the hull of an enemy submarine if caught on the surface. Apart from the French national markings, this machine is decorated with eyes and mouth – presumably representing a shark – on its inter-plane fuel tanks. However, no other identification letters had been allocated to Escadrille G 489 by the time the First World War ended. (Artwork by Luca Canossa)



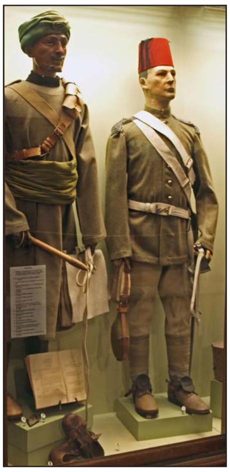
Italy's newly formed 12th Squadrigia was sent with four Caproni Ca.3 heavy bombers to Millaha on the eastern side of Tripoli in October 1916. From here they played a vital role in consolidating the Italians' hold on a small number of Libyan coastal enclaves. In March 1917 three slightly more powerful Caproni Ca.3 machines with 300hp engines were added to 12th Squadrigia's inventory, one of these being number 23137 shown here, and again based as Millaha. Officially, however, the 300 hp Caproni bomber would not be re-designated as the Ca.33 until after the First World War. (Artwork by Luca Canossa)



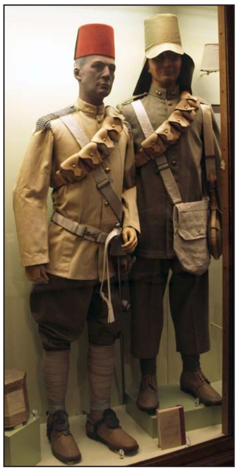
An Italian Navy Servizio Aeronautico FBA Type H, pennon number 9 of the 286th Squadriglia based at Khums in Libya in 1918 and armed with a Fiat-Revelli or Fiat machinegun. Pennant numbers were specific to each base, in this case being from 1 to 17. The serial numbers of the machines allocated to the 286th Squadriglia are also known but the link between serial numbers and pennant numbers are not. Here it has been assumed that the pennant numbers were allocated in chronological order, thus giving pennant number 9 to serial number 6417. (Artwork by Luca Canossa)



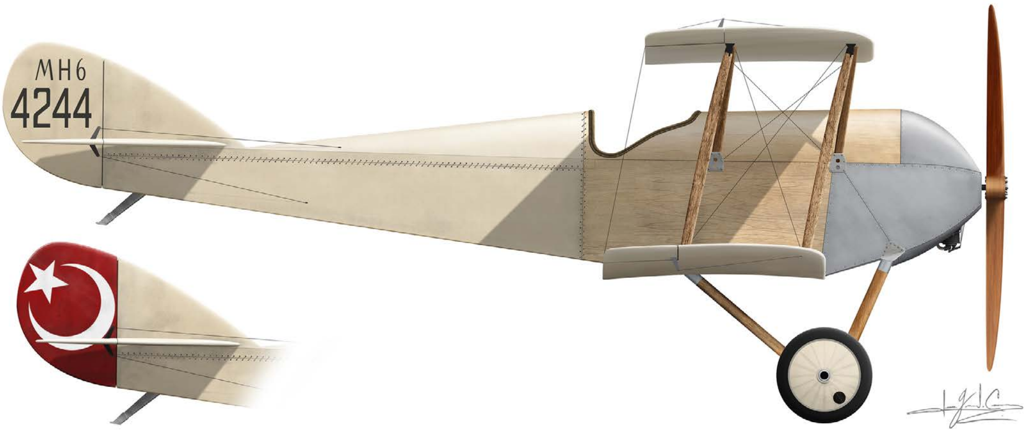
Prince Abbas Halim, a junior member of the Egyptian royal family, in the dress uniform of a German Uhlan cavalry officer. Although he served in this unit while an aide-de-camp to Kaiser Wilhelm II, the presence on an Iron Cross medal, an Ottoman medal and the badge of a German Luftstreikräfte pilot, show that this painting was made during or even after the First World War. (Nour Bardai archive)



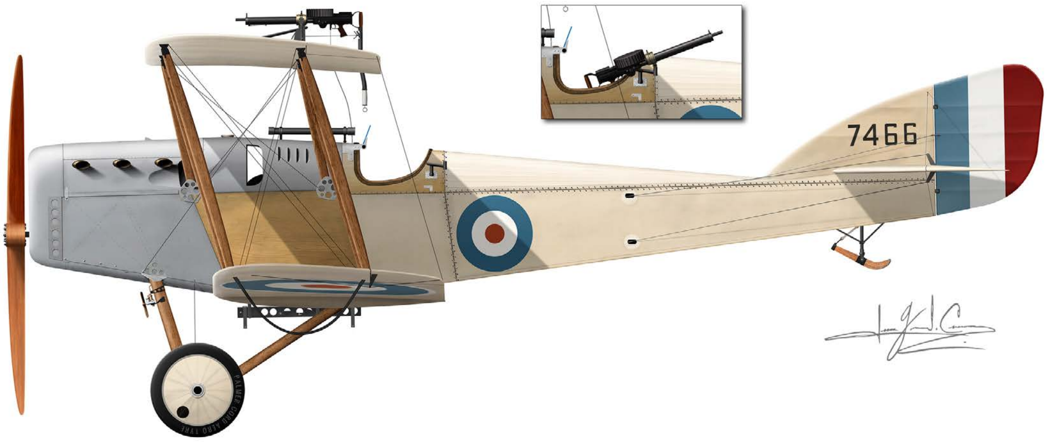
Following the end of the First World War, the only major participant to attempt to give credit to all the victorious Allied countries was Belgium. As a result the Royal Museum of the Armed Forces in Brussels has a perhaps unique collection of Egyptian Army uniforms dating from the 1914-1918 conflict. Those seen here are the field uniform of a Camel Corps trooper on the left, and the field uniform of an artillery officer on the right. (Author's photograph)



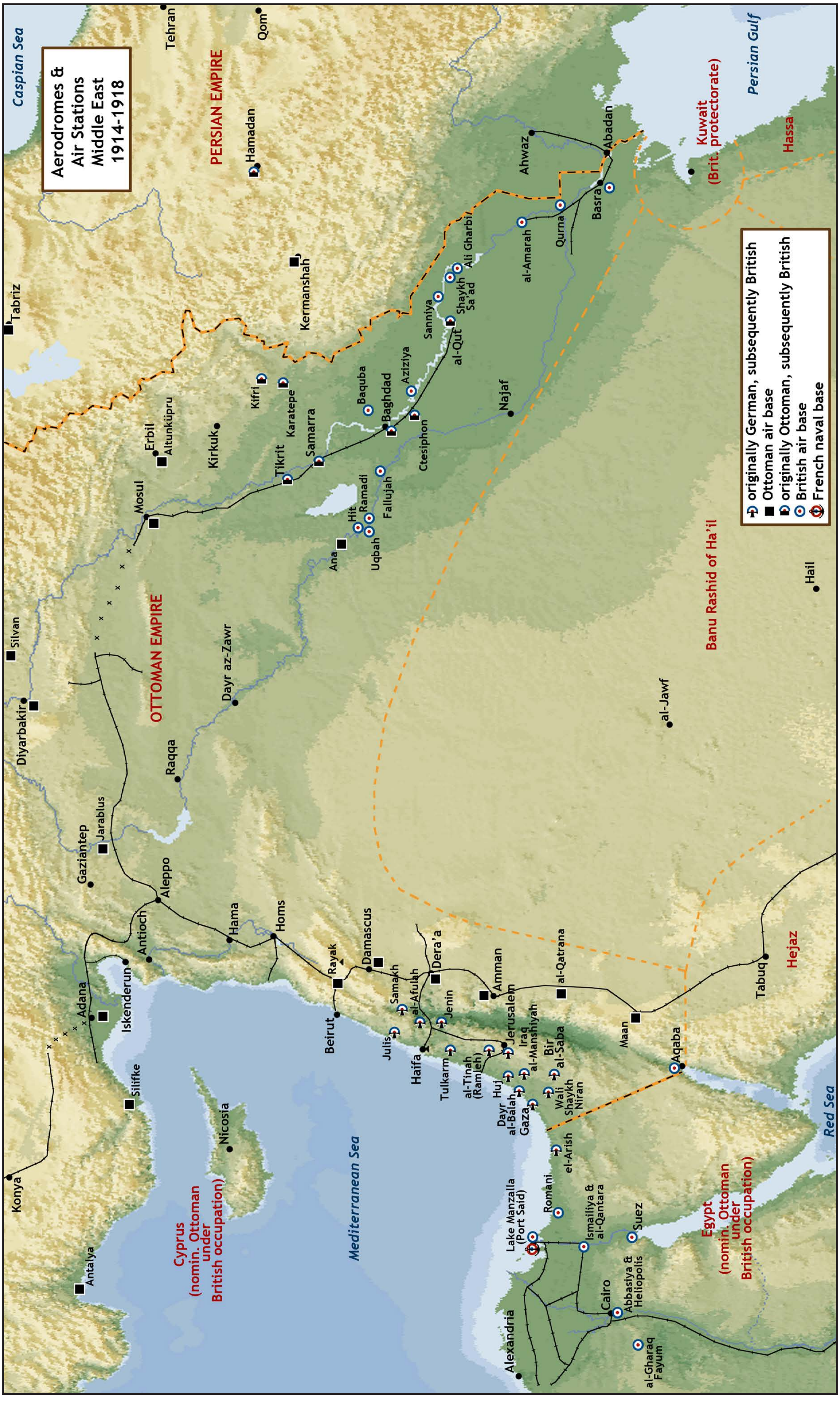
Also displayed in Belgium's Royal Museum of the Armed Forces are the field uniform of an Egyptian Army cavalry officer on the left and of a cavalry trooper on the right. The figure on the right also wears the highly distinctive khaki fez-cover and neck flap. (Author's photograph)

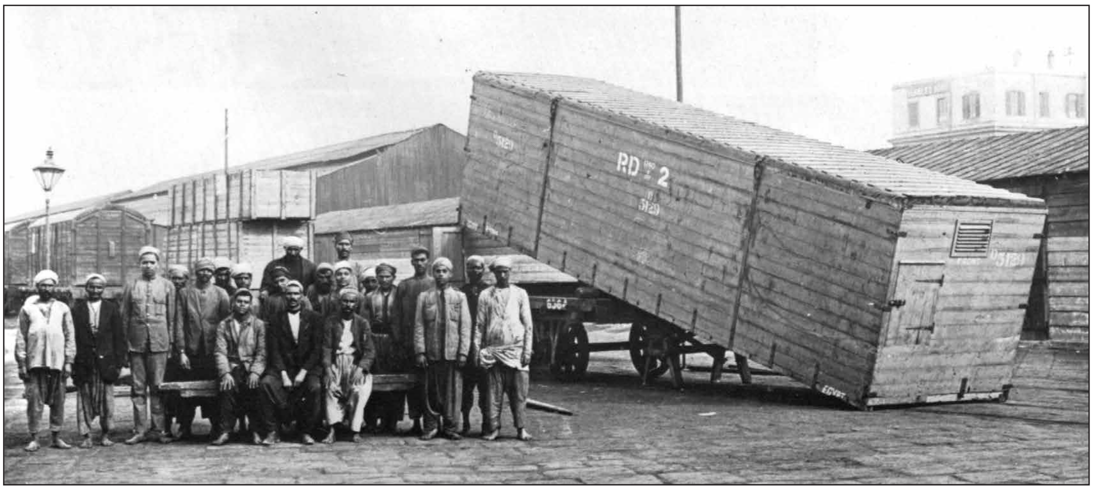


This Martinsyde S.1 carried both the RFC number 4244, and the (British) Indian Air Force number MH6, though being listed as Indian Air Force number IFC6. Flown by Major H.L. Reilly, it was forced down by anti-aircraft fire on 21 November 1915. Reilly was captured and his Martinsyde S.1 was probably the machine repaired by the Ottomans, who added a slightly unorthodox version of their early red and white national markings. Other Martinsyde S.1 Scouts in Mesopotamia were IFC5/MH5 (RFC 4243) which was destroyed at Ali Gharbi on 13 September 1915, IFC8/MH8 (RFC 4250) in which Lt. Fulton was shot down and captured the day after Reilly, and IFC9/MH9 (RFC number unknown) which was abandoned at Kut al-Amara on 29 April 1916. Ottoman records show that one captured Martinsyde, probably ex-RFC 4244 (IFC6/MH6), was attached to the Mosul Aircraft Park in 1917 and 1918. (Artwork by Luca Canossa)

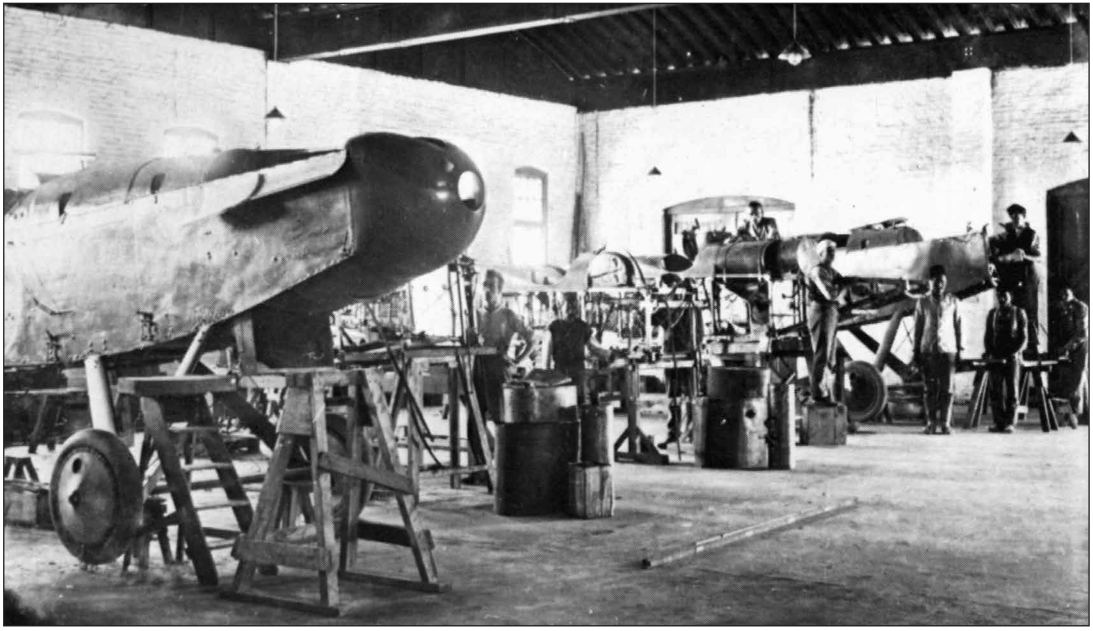


Martinsyde G.100 number 7466 was flown by Lt. T.E. Lander of No. 30 Sq. when he was wounded in combat and forced to land near Tikrit in central Iraq on 6 May 1917. He had been accompanying a BE2c flown by Lt. Lionnel Skinner, when they were intercepted by Feldwebel Johannes Pommrich (or Pomerich) in a Halberstadt. The Martinsyde G.100 was captured, badly damaged, and although it was given Ottoman national markings while retaining its RFC number, could not be repaired and was therefore used as a ground decoy. The machine was further damaged when recaptured by British troops who tried to tow it behind an armoured car. This aeroplane could be fitted with forward and rearwards firing guns, one mounted above the upper wing because the British lacked reliable interrupter gear when the G.100 was built. A second could be mounted behind the pilot's left shoulder. However, this does not seem to have been attached when Lander was brought down. (Artwork by Luca Canossa)

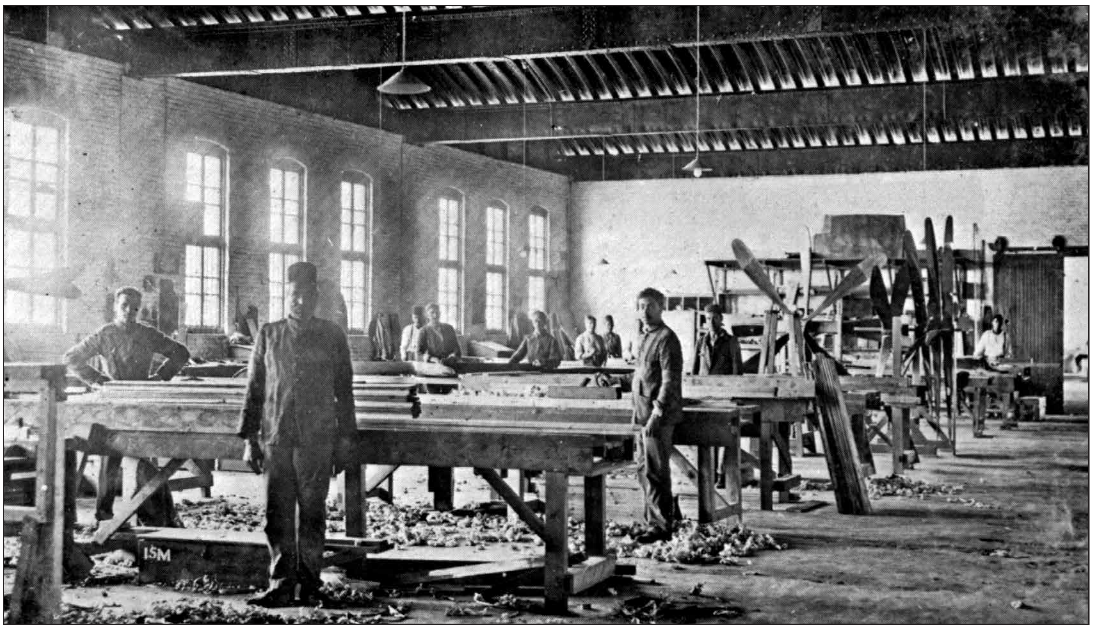

Aerodromes & Air Stations Middle East 1914-1918
originally German, subsequently British
Ottoman air base
originally Ottoman, subsequently British
British air base
French naval base
Caspian Sea
Persian Gulf
Mediterranean Sea
Red Sea
PERSIAN EMPIRE
OTTOMAN EMPIRE
Kuwait (Brit. protectorate)
Hassa
Banu Rashid of Ha'il
Hejaz
Cyprus (nomin. Ottoman under British occupation)
Egypt (nomin. Ottoman under British occupation)
Tehran
Qom
Tabriz
Hamadan
Kermanshah
Ahwaz
Abadan
Basra
Qurna
al-Amarah
Ali Gharbi
Shaykh Sa'ad
Sanniya
al-Qut
Aziziya
Najaf
Ctesiphon
Baghdad
Baquba
Kifri
Karatepe
Samarra
Tikrit
Kirkuk
Erbil
Altunküpru
Mosul
Hit
Ramadi
Fallujah
Uqbah
Ana
Silvan
Diyarbakir
Dayr az-Zawr
Raqqa
Jarablus
Gaziantep
Aleppo
Antioch
Iskenderun
Adana
Hama
Homs
Rayak
Damascus
Beirut
Samakh
al-Afulah
Dera'a
Jenin
Julis
Haifa
Tulkarm
al-Tinah (Ramleh)
Jerusalem
Amman
Iraq al-Manshiyah
Huj
Dayr al-Balah
Gaza
Bir al-Saba
Wali Shaykh Niran
al-Qatrana
Maan
Aqaba
Tabuq
al-Jawf
Hail
el-Arish
Romani
Lake Manzalla (Port Said)
Ismailiya & al-Qantara
Suez
Cairo
Abbasiya & Heliopolis
Alexandria
al-Gharaq Fayum
Konya
Antalya
Silifke
Nicosia



Egyptian dock labourers in Alexandria, with a wooden packing crate containing a disassembled Armstrong Whitworth F.K.8. The machine's serial number, D5129, is stencilled several times on the side of the crate and the photograph was probably taken in 1918. (Aeroplane Collection)



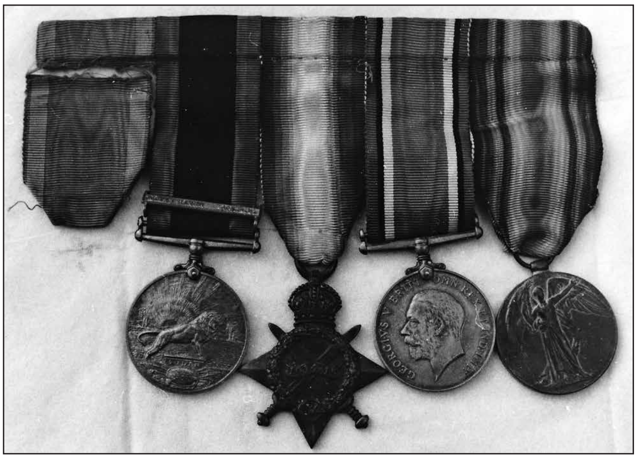
Inside a fuselage assembly workshop of the Eastern Aircraft Factory at Abu Qir, showing two Airco (De Havilland) DH9s and one other machine. While the British fitters adopt a relaxed posture, the Egyptians stand rigidly to attention. (Private collection)



Most of the craftsmen seen here in a propeller workshop of the Eastern Aircraft Factory at Abu Qir, are Egyptian. (Private collection)

For the culminating battle of Megiddo from 19-25 September 1918, the British were supported by 80,000 men of the Egyptian Labour Corps and Camel Transport Corps. Immediately after the resulting Allied breakthrough, a unit of Egyptian soldiers was sent to the main enemy aerodromes to collect anything useful before it was looted by local Palestinian Arabs or souvenir hunting British or Imperial soldiers. As Collett wrote;

> A day or two later orders came through to pack up and move over to our Headquarters near Sarona where we were joined by the other two (Balloon) Sections. As soon as the move was completed 'Canada' and 'Red' (the nicknames of British officers) were detailed to take a party of Egyptian Army each up to the aerodromes at al-Fulleh (al-Afula) south of Nazareth and Jenin (Jinin). They set off in lorries on the night we moved camp and were, I think rather sorry to go. At these aerodromes, their duties were to superintend the collecting of all aeroplanes and parts and stores, getting them sorted into dumps for later removal. Most of the stuff, however, that might have been of use had been burnt (by the enemy before they retreated)....
>
> Two or three days later 'Bim' Warne came over to our mess and suggested a trip on the morrow to Caesarea. This was arranged, so next morning we set off in a Ford armed with maps and cameras. We skirted Kalkilieh (Qalqiliyah) and Tul Keram (Tulkarm) where we saw two French guns captured during the Franco-Prussian War that had been converted into 'Archies' (anti-aircraft guns, by the Ottoman Army)…. At Jenin, so 'Red' told me, there was a huge cave in which was stored an immense quantity of drink consisting of Martells' Three



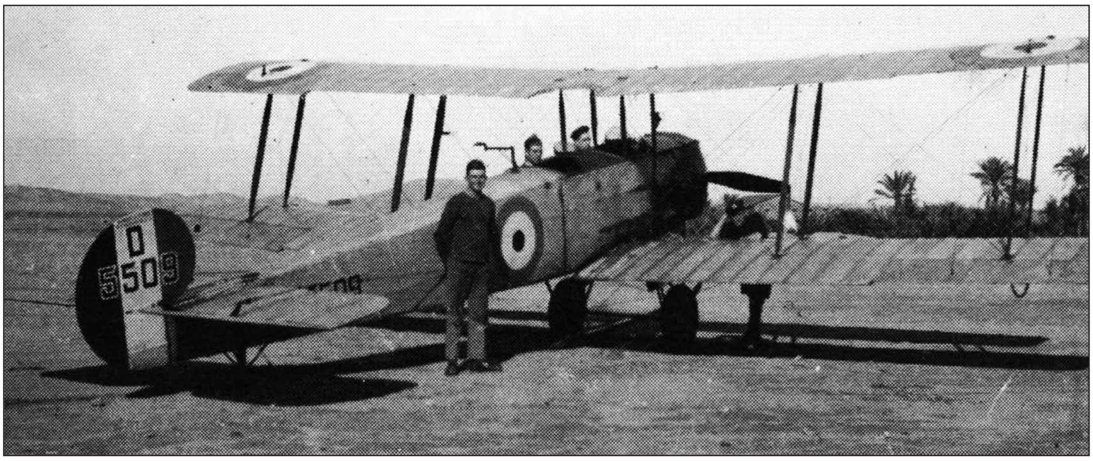
The medals Iskander Abdo Agami earned during the First World War. The three campaign medals on the right were popularly known to British soldiers as Pip, Squeak and Wilfred. They consisted of the 1914-15 Star, the 1914-18 Medal and the 1914-19 Medal. In addition Iskander Abdo Agami was awarded the Fu'ad I Sudan medal dated 1335AH (1916AD) with the Aliabdinka bar. After the end of the Great War he was also given the Medal of the Nile, equivalent to the British OBE, for long and loyal service. Unfortunately, only its ribbon survives as the medal itself has been lost. (George Agami collection, author's photograph)

Star Brandy, vintage champagne, German Rhine wines, together with great rolls of dried fruit which looked like linoleum. This, when soaked in water, was much appreciated by the Sudanese troops. Red had many tales to tell of this cave, the contents of which were guarded daily by a sentry and (was) intended for the use of various HQs. Apart from a liberal supply which he (already) had up there, 'Red' was able to bring down with him only a bottle of brandy which he presented to the Major, and a couple of bottles of wine, which he and I sampled.

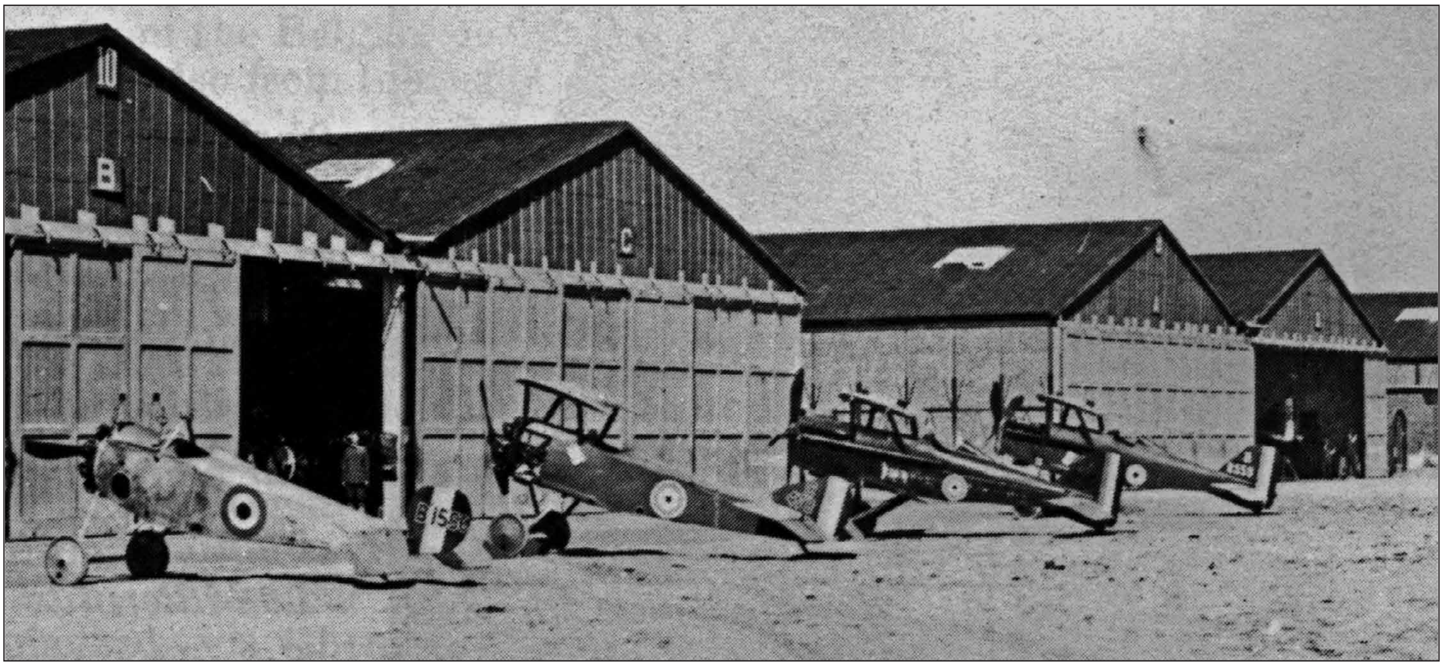
When the news of this cave was noised abroad a certain Major, who shall be nameless, went there and came out with many bottles under his arms. 'Halt', says the sentry, who was Australian, at the mouth of the cave. 'What do you mean – Halt?', says the Major. 'I mean, halt, and put down the bottles, Sir', says the sentry, quite polite. 'Oh,' replies the major, 'that's all right, my man. I'm Major ---- of the ----- ', and starts to walk away. The sentry, according to his interpretation of his orders, advances opening and closing the bolt of his rifle whereupon the Major, regretfully but wisely, puts down the bottles and walks away.

The advance of the Egyptian Expeditionary Force was now inexorable. On 1 October Damascus fell, followed on the 25th by Aleppo. Five days later the Ottoman Empire signed an Armistice Agreement at Mudros on the Greek island of Limnos.

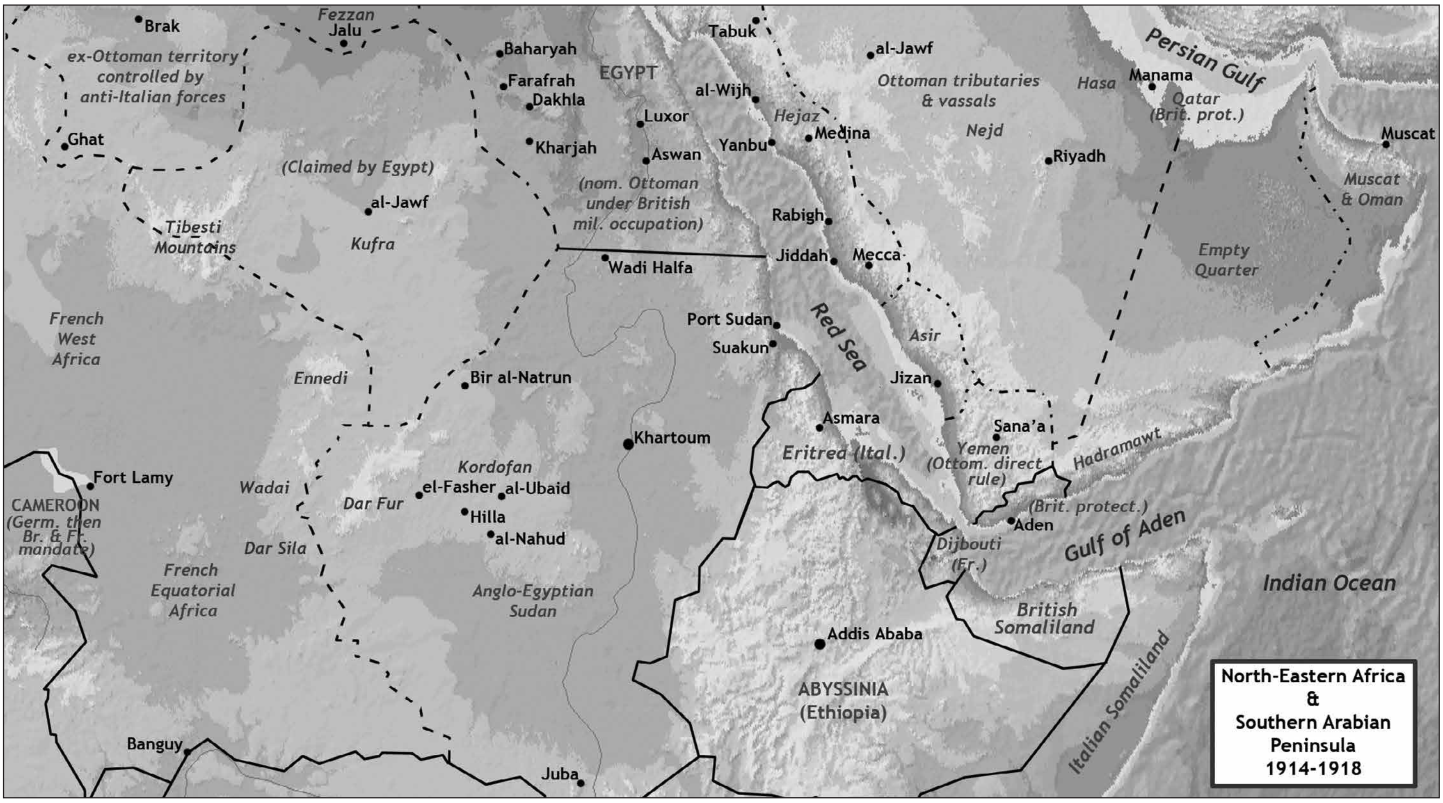
Throughout this long and hard-fought campaign, the British and Imperial troops at the front had been supported by increasingly strong and effective rear area units garrisoning and defending Egypt itself. These included a significant part of Egypt's own military resources. Thus,



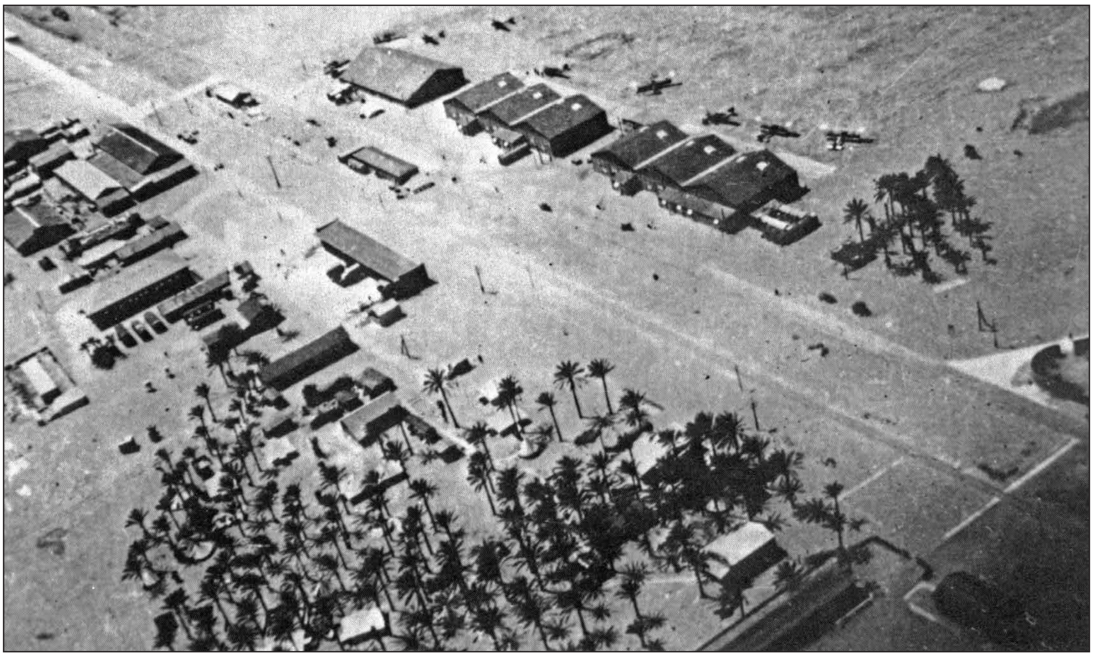
One of the aeroplanes which is known to have been assembled by the Eastern Aircraft Factory in Egypt was this Avro 504J, serial number D5509. It was still in service in Egypt in 1919. (Mrs. I.W. Austin photograph, via P.G. Cooksley)



The wingless fuselages of Nieuport 17 (serial number B1556), Sopwith Pup (serial number C478), SE5a (serial number D3917) and SE5a (serial number B8559) lined up outside the workshops of the Eastern Aircraft Factory as Abu Qir in Egypt. (Private collection)


Brak
Fezzan
Jalu
ex-Ottoman territory controlled by anti-Italian forces
Ghat
Baharyah
Farafrah
Dakhla
EGYPT
Luxor
Kharjah
Aswan
(Claimed by Egypt)
al-Jawf
Kufra
Tibesti Mountains
(nom. Ottoman under British mil. occupation)
Wadi Halfa
Tabuk
al-Jawf
al-Wijh
Hejaz
Yanbu
Medina
Ottoman tributaries & vassals
Nejd
Hasa
Manama
Qatar (Brit. prot.)
Persian Gulf
Riyadh
Muscat
Muscat & Oman
Rabigh
Jiddah
Mecca
Empty Quarter
French West Africa
Port Sudan
Suakun
Red Sea
Asir
Ennedi
Bir al-Natrun
Jizan
Asmara
Khartoum
Sana'a
Eritrea (Ital.)
Yemen (Ottom. direct rule)
Hadramawt
Fort Lamy
CAMEROON (Germ. then Br. & Fr. mandate)
Wadai
Dar Fur
Kordofan
el-Fasher
al-Ubaid
Hilla
al-Nahud
Dar Sila
(Brit. protect.)
Aden
Gulf of Aden
Djibouti (Fr.)
Indian Ocean
French Equatorial Africa
Anglo-Egyptian Sudan
British Somaliland
Addis Ababa
ABYSSINIA (Ethiopia)
Italian Somaliland
North-Eastern Africa & Southern Arabian Peninsula 1914-1918
Banguy
Juba

(Map by Tom Cooper)



Abu Qir aerodrome, about 20kms east of Alexandria, photographed from a height of just under 200m. (about 600ft). The hangers of No. 22 Reserve Sq. can be seen at the top, the Headquarters of No. 20 Wing in foreground, with staff quarters at the lower right. (T. Foreman Collection, courtesy of Cross & Cockade International)

according to the EEF Order of Battle in 1917-18, the mounted troops included the No. 7 Company of the Egyptian Army's Bikaner Camel Corps, while the infantry included one company from the 3rd Egyptian Infantry Battalion and one Egyptian Army Machine Gun Section, one detachment from the Egyptian Camel Transport Corps from No. 1 Camel Depot, plus the Egyptian Army Transport Corps based at Tal al-Kibir. The Egyptian Army's ordnance workshops were in the Cairo Citadel where they cleaned and repaired small arms, machineguns and other equipment for the Egyptian Expeditionary Force.

By November 1917 the British authorities were deeply concerned by the general shortage of manpower for key industries. Within the UK women were enlisted to take over many jobs. In Egypt, the British military authorities turned to local skilled and semi-skilled labour, both Egyptian and from other communities, resident in the country. The RFC's Training Squadron particularly needed carpenters, sail-makers and blacksmiths. To the surprise of some British observers, this experiment proved highly successful and so the training of local labour was gradually extended to the trades of armourer, coppersmith, vulcanizer (rubber tyre repairer), photographer and motorized transport driver.

More ambitious was the plan to establish a factory to assemble and partially construct aeroplanes in Egypt, because Allied merchant shipping in the Mediterranean was under great strain, suffering significant losses to enemy submarines. The idea was first proposed to the British Air Board by Brigadier General Salmond in January 1917, who suggested that a British manufacturer be asked to establish a branch factory in Egypt. However, it was soon realised that a shortage of locally available raw materials rendered that idea impracticable. An alternative was for a factory to assemble aeroplanes which had been built in the United Kingdom, then shipped in parts to Egypt. This would still reduce the RFC/RAF's demand for tonnage space aboard the overstretched transport ships.

By June 1917 work had started on the building of a factory at Abu Qir, east of Alexandria. Meanwhile personnel, including local Egyptian mechanics, were selected and given training at the RFC's X Aircraft Park at Abu Qir. The factory was to be known as the Eastern Aircraft Factory but the project suffered serious delays, not least in the arrival of necessary machinery. Finally, in January 1918, the factory was opened with Lieutenant-Colonel H. Burchell in command. He had been closely involved in the project from the start. The factory was organized with sections for wing assembly and fabric covering, fuselage assembly, then the final assembly, testing and inspection of the resulting aeroplane. Amongst the British personnel posted there was Leading Aircraftsman George Blunt who worked on the first aeroplane ever to be built, or more correctly to be assembled, in Egypt. This was at the start of 1917, before the factory itself was completed. Other sections of the establishment dealt with stores, transport, engine overhaul, and propeller manufacture.

Meanwhile the system of X Depots and Establishments in Egypt had grown quite complex. During January 1918, the Aeroplane Repair Section remained at Abu Qir. However, in August the Engine Repair Section was transferred from X Aircraft Depot to HQ Middle East while the repair establishment at Abu Qir became an Acceptance, Workshop and Salvage Park with its own separate HQ. Nevertheless, this was still administered by X Aircraft Depot which itself remained in existence for a short period after the war ended, supporting the RAF in Palestine and Egypt. It was finally disbanded in 1919.

In February 1918, the Base Depot at Abu Qir asked the War Office in London for permission to recruit local boys in the fifth year of their technical apprenticeships, and to accept trained local mechanics who could pass a 'trade test'. Local Egyptian instructors were needed so that these new recruits would have a basic knowledge of their future duties. They would then be given a short course of specialised instruction by British instructors from the Eastern Aircraft Factory which had opened the previous month. It was agreed that an initial 400 Egyptians would be given instruction, eventually to increase to 2,000 men.

According Lieutenant Colonel C. Fraser of the Middle East HQ Air Staff, some 1,200 to 1,500 Egyptian and other local civilians were employed in this field in Egypt. Between January and the end of the Great War in November 1918 forty-eight aeroplanes were constructed by the Eastern Aircraft Factory at Abu Qir. They were used by the RAF in the Middle East, including unassembled aeroplane parts reportedly delivered to X Aircraft Depot between October 1918 and April 1919. Though records are incomplete, these machines included RE8s, Avro 504Js and perhaps other types. RE8s mentioned after the end of the war included serial numbers C5101 to C5125, of which C5111 to C5120 arrived from England on 15 December 1918. The Avro 504Js also included serial number D5509.

Meanwhile the high reputation of the Egyptian Labour Corps led to large numbers of its men being taken to France in April 1917 to work behind the lines of the Western Front. Here they were welcome, being described by one observer as notably healthy, strong and active. Eventually approximately 23,000 men of the ELC reportedly worked in France on a tour of duty lasting six months before returning to Egypt for the winter.

During the course of the First World War some sections of Egyptian society felt deeply divided in their loyalties. The majority kept their disquiet, and perhaps also their confusion, within their own family circles. Relatively few came out strongly against the British, and suffered varied sanctions as a result, while some came out equally strongly in support of the British and their Allies. One of the latter was Muhammad Ahmad Hasanain Pasha. Born in 1889, the grandson of a famous Egyptian admiral, he had been educated in Cairo and then in Oxford University. Returning to Egypt in 1914, Hasanain Pasha then served as General Sir John Maxwell's Arabic Secretary.

Much further down the Egyptian social scale was a man known only by his initials, A.C. He was one of those Egyptians who not only liked and admired the British, but was prepared to go on the record by saying so. This particular young man so admired the RFC that he wanted to join it, and sent a letter requesting permission to do so. It was then published in *The Gnome*, the RFC Middle East Command's magazine, in March 1917;

> Sir,
>
> I have the honour to inform yourself by this application that, as I am an Egyptian man, of eighteen years old, and Latin Catholic's religion, I wish to engage myself volontary (sic) at the Royal Flying Corps as pupil's aviator.
>
> I am employed at the National Bank of Egypt, and I shall leave my employ, when my application shall be accepted to serve bravely and with joy the Great British Army.
>
> In the hope of a favourable reply, I am, Sir, Your faithful servant
>
> A------- C------

It is also, perhaps, interesting to note that in March 1918, Thomas Wentworth Russell, after other service in Egypt, took over command of the Cairo Police where he became known as Russell Pasha. This had always been powerful, and it now developed into the pride of the regime. Men were only admitted after five years in the Egyptian Army or one of the other Egyptian armed services. A little over a decade later the non-commissioned ranks of the Cairo Police would almost become a fiefdom of the newly formed Egyptian Air Force, recruiting substantially from men who had done their five years' service in the Air Force.

There were, of course, also complaints within the country's ruling elite, including the royal family. One of the latter's more unexpected concerns still focussed on properties in what is now Greece, owned by the Khedive – now Sultan – of Egypt. These lay in the northern town of Kavalla, occupied by Bulgaria since August 1916, and on the disputed Aegean island of Thasos which had been occupied by a French naval force in 1916. This the Egyptian government claimed was the property of Egypt's rulers. The British Foreign Office continued to be drawn into this matter, despite the greater events unfolding elsewhere, and assured Cairo that it would ensure that Egypt's interests were not damaged. Diplomatic correspondence continues throughout the World War, mostly concerning the receipt of local rent and the future of an endangered waqf, an Islamic charitable donation which in this case consisted of a religious library in Kavalla. The Bulgarians had taken its entire collection of historic documents to the Sofia Academy of Sciences when requested to do so by the deposed Egyptian Khedive Abbas who was then living in Constantinople. These were not, however, territorial claims.

3

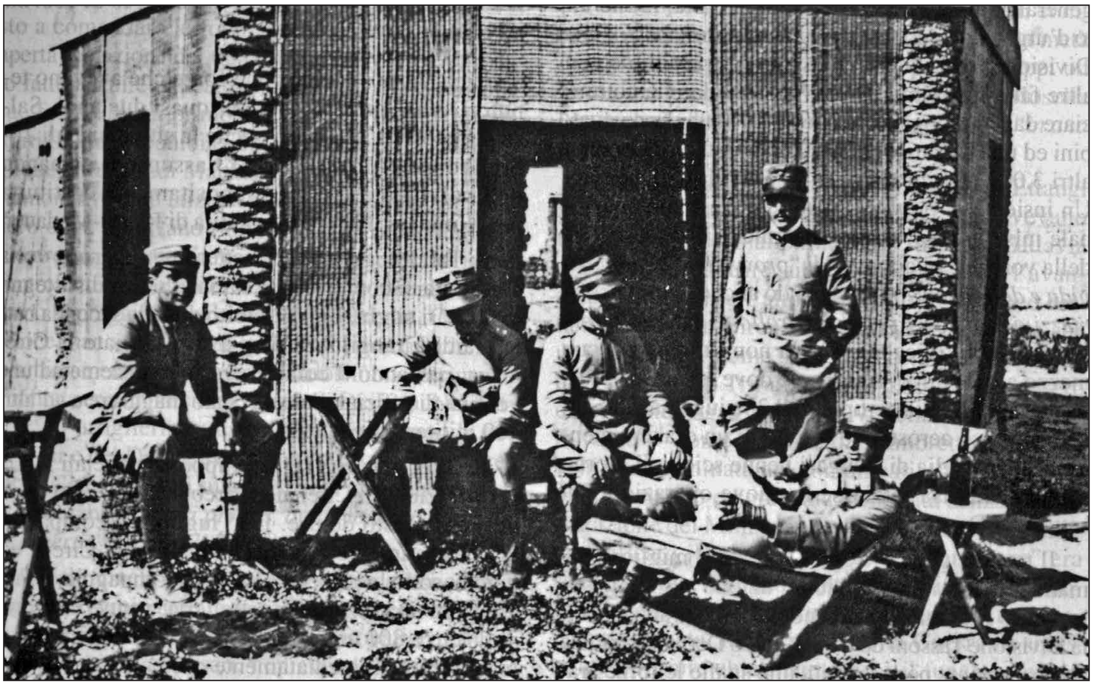
EVENTS IN THE ITALIAN COLONIES

On no other 'front' of the First World War did air power have a more direct impact upon the outcome than it did during the Italians' defence of their tenuous position in Libya from 1915 to 1918. Prior to the outbreak of the Great War in 1914, virtually the entire Sahara Desert had fallen under French or Italian control. Only in central Cyrenaica, in what is now eastern Libya, did the Sanussi movement still hold sway. Here its zawiyas or religious centres still served as focal points of political, cultural and military resistance. Meanwhile and considerably further south, the great oasis of Kufra served as the main Sanussi administrative centre. However, the quarrel between the Sanussi spiritual and political leader Sayid Ahmad, and the Turco-Egyptian officer Aziz al-Masri had caused the latter to take many of his men and his artillery to Egypt early in 1914. Strictly speaking, he should already have done this in 1912, under the terms of the Treaty of Lausanne between the Ottoman Empire and Italy. Even so, as Europe teetered on the brink of the First World War it looked as if Italy had at last won its war in Libya.

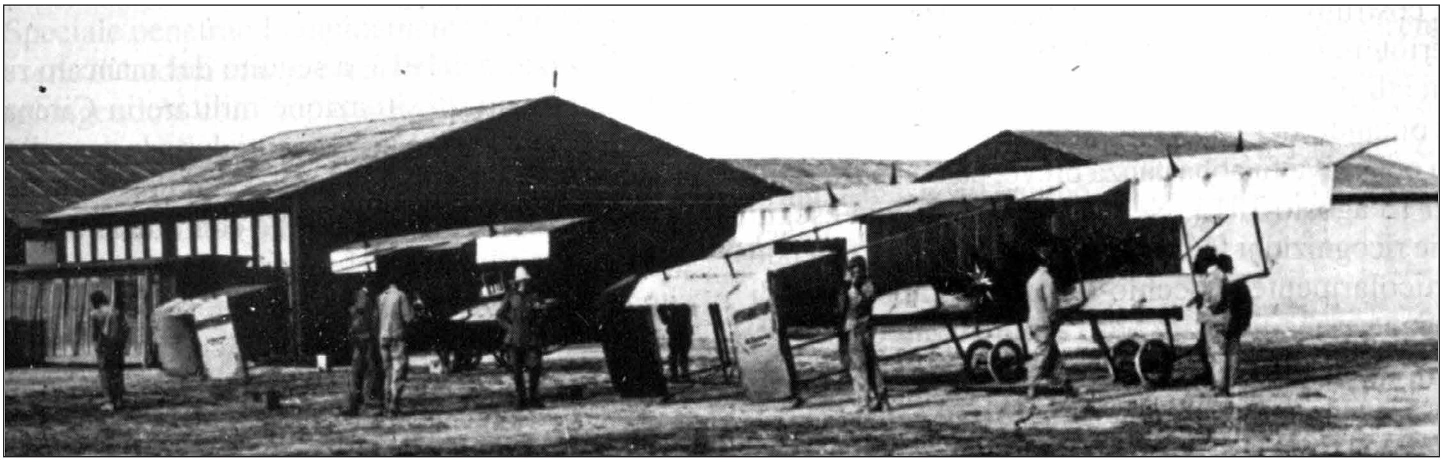
When the United Kingdom declared war on Germany in August 1914, it closed the frontier between British occupied Egypt and Italian occupied Libya because, at that time, Italy was nominally an ally – though a non-belligerent one – of Germany and Austria-Hungary. In the event Italy did not support its allies in the Triple Alliance and instead declared its neutrality. Nevertheless, the Italians in Libya did see an upsurge of hostility from various sources of resistance, not only from the Sanussi. Furthermore, their military position was much weaker than that of both the French in Tunisia, Algeria and further south in the Sahara, and of the British in Egypt and the Sudan. As a result the Italians would soon suffer several serious setbacks.

On the other side, however, the closure of the frontier also separated the Sanussi in eastern Libya from Egyptian ports, markets and sources of supply. This economic pressure even seems to have led the Sanussi leadership to consider seeking an alliance with the British in Egypt and asking for British protection against the still neutral Italians. At that point, the Italian Army in Libya suffered a major defeat when, on 26 August 1914, a large supply column across the desert was virtually wiped out. This was followed by uprisings across many other parts of Libya in September, forcing the Italian Army back into a number of small and sometimes tiny coastal enclaves.

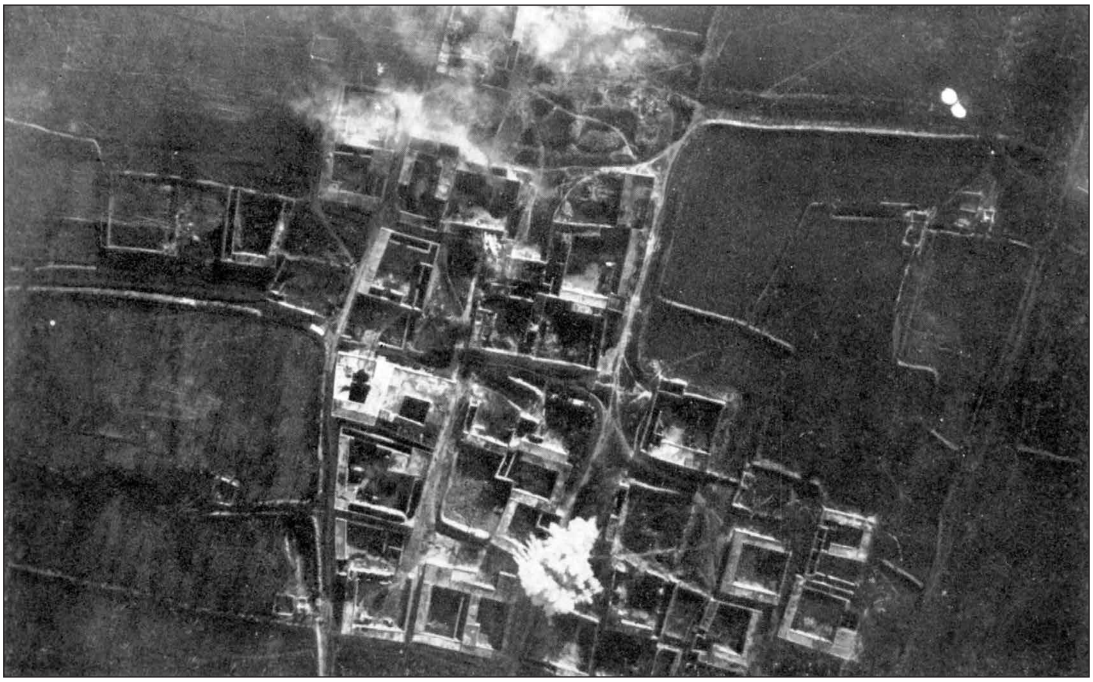
In early November 1914 the situation changed again with the Ottoman Empire's unexpected entry into the war as Germany's ally against both Britain and France. Ottoman support



The officers of a small Italian flying unit at Benghazi were posted elsewhere when Gen. Salsa launched an Italian counter-offensive against the Sanussi in late June 1913. A unit of the Corpo Aeronautico Militare would not return to Cyrenaica until autumn 1916, by which time the Italians had learned a great deal about counter-insurgency operations in a North African environment. (Archivio Ufficio Storico Stato Maggiore Aeronautica)



Two Italian Henri Farman Type 1911 Militaires at Millaha aerodrome outside Tripoli shortly before the First World War. These archaic machines had proved reliable and those shown here have shield-shaped insignia on their rudders, the three different tones of which strongly suggest the Italian national colours of red, white and green. After being withdrawn from Libya the type remained in service in Italy until 1914. (Archivio Ufficio Storico Stato Maggiore Aeronautica)

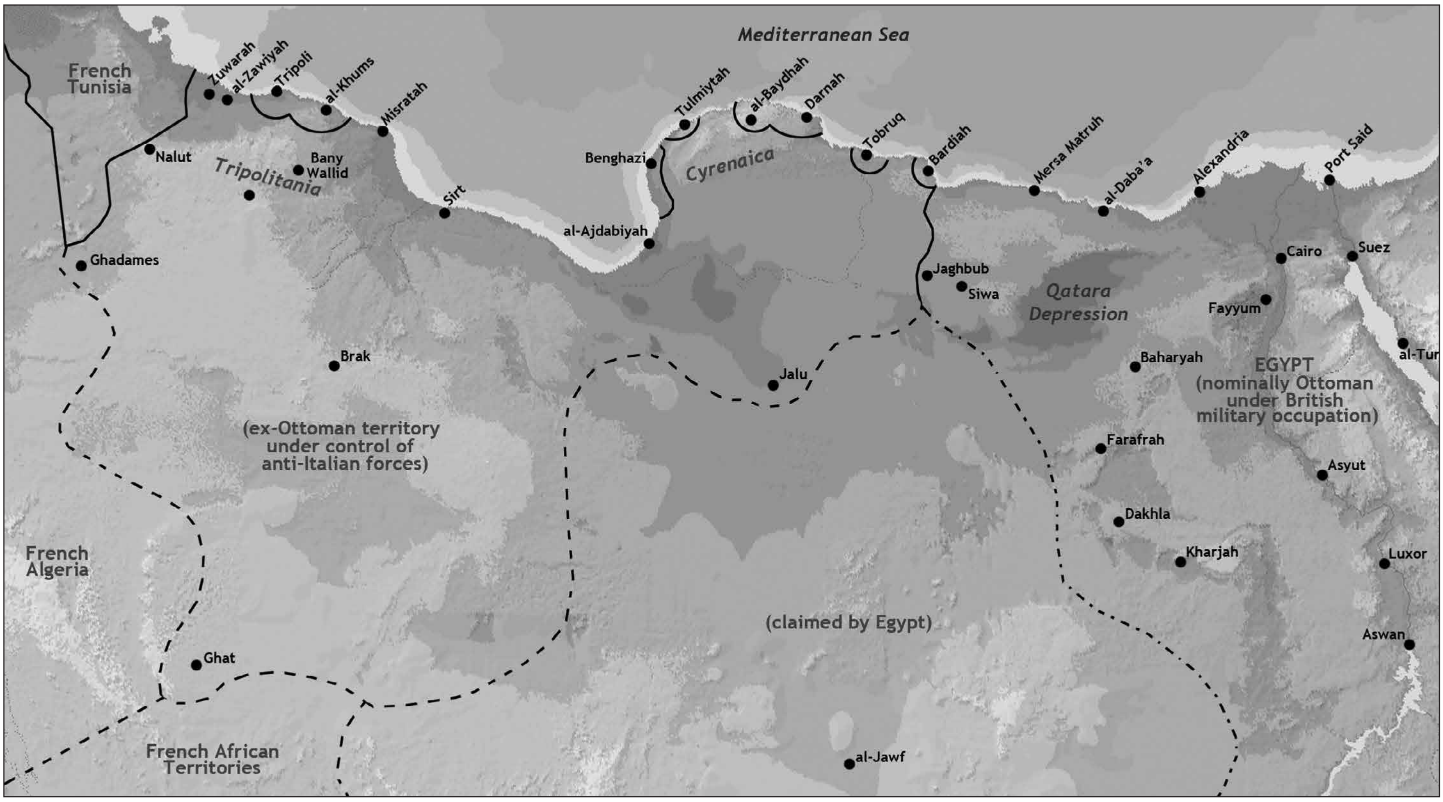


The Libyan resistance stronghold of al-Zawiyah, west of Tripoli, being bombed by Italian aircraft, probably the 104th Squadriglia Farman's MF 11 aircraft under Cap. Cesare Suglia during May or June in 1916. (ex-Vincenzo Lioy)

for the Sanussi consequently revived, although this was initially directed against the British in Egypt and the French elsewhere in the Sahara. The Ottoman Sultan-Caliph's call for a worldwide jihad against the infidel Christian oppressors was regarded by the great majority of Muslims as little more than a political ploy. In contrast in North Africa this call led to a rapprochement between the Ottoman Empire and a Sanussi resistance which had felt itself largely abandoned in 1912. Even so, most Ottoman support for the Libyan resistance seems to have been directed towards local groups in western Libya, in the province of Tripolitania, rather than to the Sanussi in the eastern part of the country.

An Italian counter-offensive now proved disastrous, with 3,500 locally recruited auxiliary troops reportedly deserting to the enemy. Large quantities of rifles and other modern weaponry also fell into Sanussi hands. Thus, for the first time in modern history, a Saharan desert people found themselves moderately well-armed and with an abundance of ammunition. Henceforth, the only advantages which the overwhelmingly outnumbered Italians enjoyed were coastal bombardment by the Italian Navy, armoured cars and aeroplanes. Suffering was even worse on the other side. Here the closure of the frontiers halted the normal importation of food into regions which were not self-sufficient, and resulted in widespread famine. Indeed some have claimed that almost two thirds of the entire population of Libya died, mostly of starvation rather than as casualties during a series of largely unsuccessful Italian offensives in late 1914. In reality the number was less, but appalling enough.

By the time Italy joined the war on the side of Britain, France and Russia, its garrisons in Libya had not only withdrawn to the Mediterranean coastal enclaves but had been obliged to abandon large stretches of the coast to assorted 'rebel' groups, including the Sanussi. On the diplomatic front, however, the treaty of April 1915 under which Italy agreed to enter the war, offered the Italians

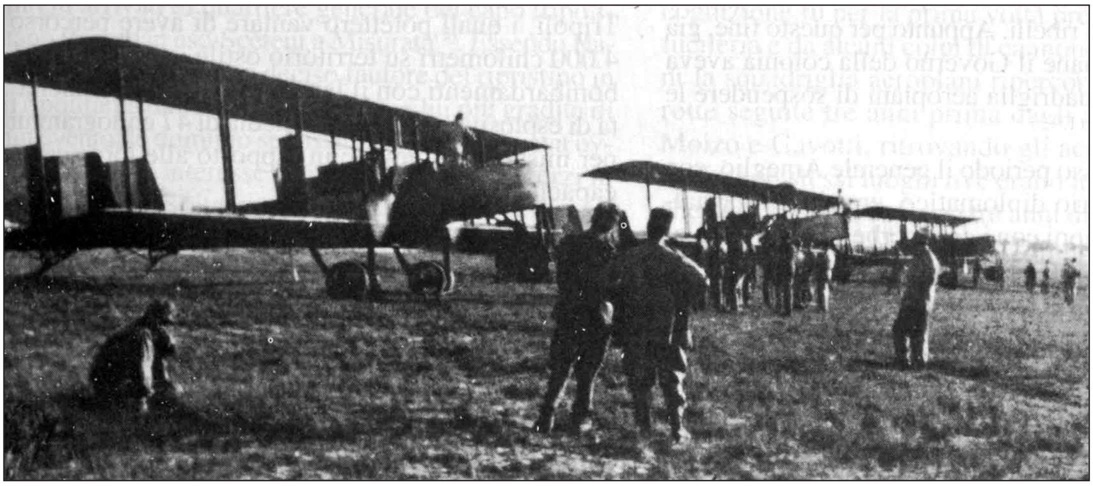

Mediterranean Sea
French Tunisia
Zuwarah
al-Zawiyah
Tripoli
al-Khums
Misratah
Nalut
Bany Wallid
Tripolitania
Sirt
Benghazi
Tulmiytah
al-Baydhah
Darnah
Cyrenaica
Tobruq
Bardiah
Mersa Matruh
al-Daba'a
Alexandria
Port Said
al-Ajdabiyah
Ghadames
Jaghbub
Siwa
Qatara Depression
Cairo
Suez
Fayyum
al-Tur
Brak
Jalu
Baharyah
EGYPT (nominally Ottoman under British military occupation)
(ex-Ottoman territory under control of anti-Italian forces)
Farafrah
Asyut
Dakhla
French Algeria
Kharjah
Luxor
(claimed by Egypt)
Aswan
Ghat
French African Territories
al-Jawf

Italian colonial possessions in North Africa. (Map by Tom Cooper) substantial territorial gains in the event of Allied victory. It even stated that, if German colonies were to be divided amongst the Allies, the Italian government could "claim some equitable compensation, particularly as regards the settlement in her favour of the questions relative to the frontiers of the Italian colonies of Eritrea, Somaliland, and Libya and the neighbouring colonies belonging to France and Great Britain".

In strict legal terms the British had no such "colonies", as Egypt and the Egyptian Sudan were occupied by the British Empire, not forming part of it. This promise was repeated in July 1916, when the United Kingdom agreed that the final determination of the disputed frontier between Egypt and eastern Libya, then referred to as Cyrenaica, would be postponed until after the war. Little if any consideration seems to have been given to the wishes of the local people or, indeed, of the Egyptian government.

Diplomats were not the only people making plans at the time that Italy was preparing to declare war. General Luigi Cadorna, the Commander of the Italian Army, had decided that military actions in Libya would be very limited and should be intended merely to control the situation, while the Italian Army focussed on its main effort against the Austro-Hungarian Empire. In the latter case this meant opening a new front in the Great War, along the mountainous frontier of north-eastern Italy. Even so, the situation in Libya was currently so dangerous that Italian troop numbers here could not be significantly reduced.

Eventually General Cadorna and the Italian government agreed a plan. This envisaged the Italian Army defending its main military bases in western Libya, in Tripolitania, which were the city of Tripoli and Khoms (al-Khums), while seeking to hold the area north of a line from Zuwarah through Yafran, Gharyan and Tarhunah then along the coast to Misratah and Sirt. As it turned out, even this proved to be too ambitious. Meanwhile in eastern Libya, in Cyrenaica, Italian forces would not only defend their existing series of coastal enclaves, but also try to retake the whole eastern coast and part of the Egyptian



Three Caproni tri-motors preparing to take off on a bombing missions from Millaha aerodrome outside Tripoli, probably in late 1916. They are believed to be from the first four Caproni Ca.32 bombers to be sent to Libya in October that year. (Archivio Ufficio Storico Stato Maggiore Aeronautica

Soldiers of the 3rd Battalion of Libyan askaris under training around 1916. The men with the taller fez-type headgear at the front and rear of this column are Eritreans from the much more experiences and, as it turned out, more reliable East African units who played such a major role in preserving Italy's tenuous hold on a number of isolated Libyan coastal enclaves during the Great War. (Renzo Catellani archive)

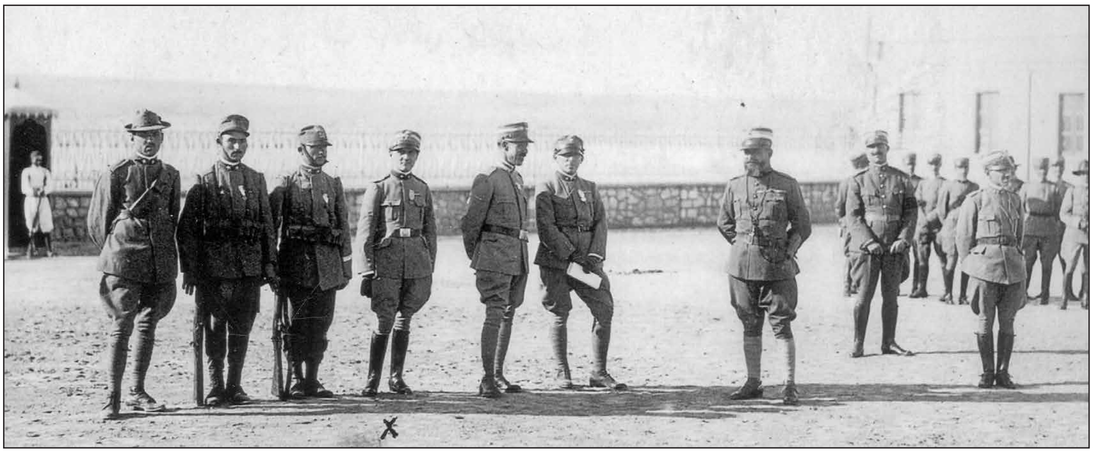
An Italian motorized column near Marsa Susa in Cyrenaica bringing reinforcements, including a number of nurses, to Cirene in 1916. The Sezione banner in the leading vehicle seems to incorporate a "moon face" remarkably similar to that later painted on the nacelle of at least one Maurice Farman MF 11 in Libya. (Vincenzo De Gaetano archive)

In December 1916 pilot Sgt. Raoul (or Raul) Moore of the 106th Squadriglia Farman, escaped from the enemy held fort of al-Aziziya with his observer, Tenente Ermanno Bartolini of the 84th Infantry Regiment. They had been captured on 25 October after their Farman, serial number 683, was forced down by ground-fire. (Gioseffi family archive)

frontier. This was to stop Sanussi ‘rebels’ receiving supplies from sympathisers in British-occupied Egypt. This also failed, at least at first, and for much of the First World War the Italian Army in Libya only reacted when it was attacked. On the other hand, the resulting small-scale skirmishing would largely go in favour of Italian forces.

On 3 May 1915, Italy officially left the Triple Alliance and the following day Rome denounced its former Austro-Hungarian and German allies for aggression. Continuing resistance in the Italian parliament to Italy’s entry into the war nevertheless meant that a change of government was needed before the “interventionists” got their way. Thereupon, Italy declared war on Austria-Hungary on 24 May 1915. Nearly three more months passed before Italy declared war on the Ottoman Empire on 21 August 1915, supposedly for its support of “rebels” in Libya. This was followed by an Italian declaration of war on Bulgaria on 20 October. For reasons which still remain rather unclear, Italy did not declare war on Germany until 28 August 1916.

The next phase of Italy’s war in Libya lasted from late May 1915 until April 1917 when a so-called *Modus Vivendi* with the Libyan resistance was agreed. By then two years of low-level conflict had been divided between two almost entirely separate fronts. In Tripolitania German submarines put some Ottoman officers ashore to help a pro-Ottoman resistance movement led by Ramadan al-Shtaiwi. He, however, quarrelled with the Sanussi of eastern Libya early in 1916, thus weakening the Libyan resistance as a whole.

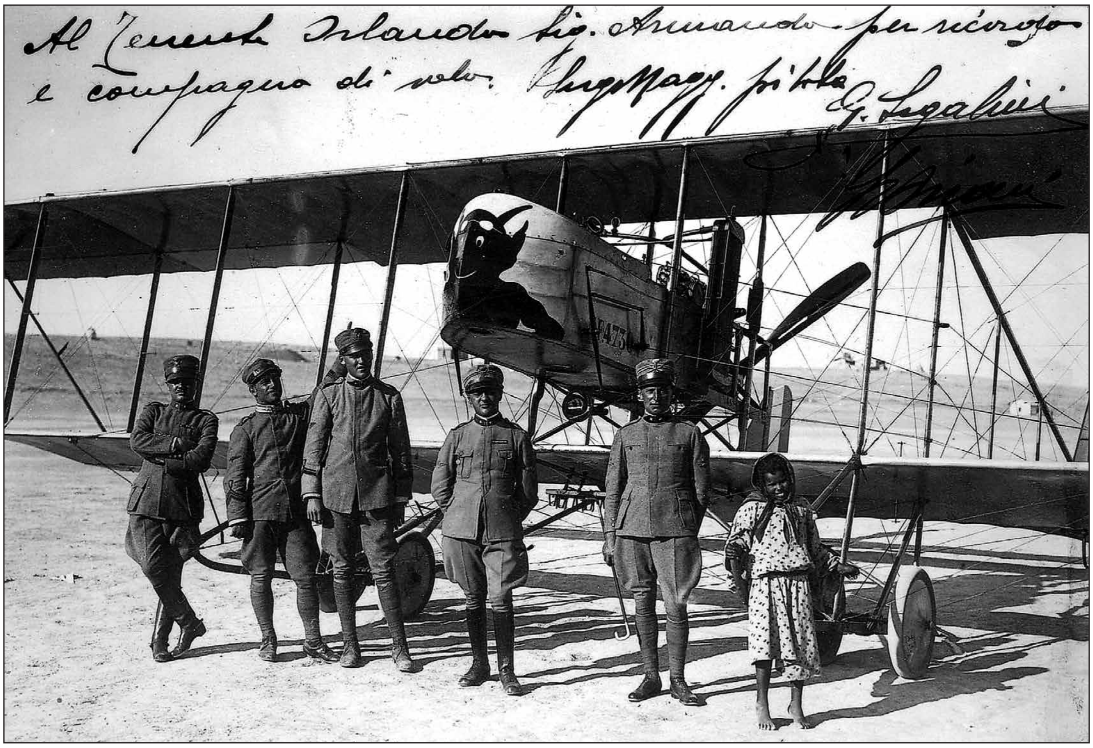


On 11 November 1916 a number of Italian officers and soldiers were awarded the Medaglie al Valore at a ceremony in Tubruq (Tobruk). They included Tenente Armando Orlando, a Maurica Farman MF 11 pilot of the 104th Squadriglia of the Corpo Aeronautico Militare. Here he is seen shown fourth from the left and marked with an X. (Museo Storico Aeronautica Militare, Vigna di Valle)

Tenente (Lieutentant) Arturo Gioseffi, the Commander of the 106th Farman Squadriglia based at Khums about 100kms east of Tripoli in Libya. This photograph may, however, have been taken earlier in his career. (Gioseffi family archive)

It has been suggested that British success using aeroplanes, armoured cars and camel-mounted infantry against the Sanussi at Sollum in Egypt in January 1916 encouraged the Italians to put increasing reliance upon aeroplanes in Libya. However, this seems unlikely because the Italians had themselves already successfully pioneered such a form of desert warfare. What is clear is that Italian troops regained the oasis of Zuwagha near al-Zawiyah, west of Tripoli. They also cowed some neighbouring tribes through the use of aerial bombing and naval bombardment early in 1916. In fact, such combined operations by the Italian Army and Italian Navy, both with air support, became a feature of the campaign against Ramadan al-Shtaiwi’s followers in Tripolitania. This successfully regained the nearby coasts and foothills, then pressed on to regain control around Misratah to the east and Zuwarah in the west during 1916 and 1917.

The role of Italian aeroplanes was, in fact, vital during the early defensive phases of Italian operations in Libya, especially in the reoccupation of Zuwarah. Even a squadron of heavy bombers, the newly formed 12th Squadrigia with four Caproni Ca.32 machines, was sent to Millaha (now Mitiga military airport) just east of Tripoli on 2 October 1916. This was already home to the 104th Farman Squadron and an airship section which had returned to Libya somewhat earlier. Three weeks later, on 26 October, the twin-engined Capronis bombed Funduq al-Sharif, followed on 1 December by the bombing of the castle and fort of Azizia where a Libyan resistance leader named Sulayman Baruni had his headquarters.


Al Tenente Orlando Sig. Armando per ricordo
e compagno di volo. Ing. Magg. pilota G. Segalini
F.473

Armando Orlando of the 104th Squadriglia (fourth from the left) in front one of the unit's now out-dated Maurice Farman MF 11s, serial number F.4730. The nacelles of several of this unit's aeroplanes were decorated, in this case with a smiling demon's face, probably painted in red. Note that the underneath of the Maurice Farman's upper wing extensions are painted a dark colour, this being green on the starboard side. It was part on an identification system introduced earlier in the war, in which the left or port side wing extension was painted red. (Museo Storico Aeronautica Militare, Vigna di Valle)

A small number of Ottoman officers and NCOs as well as small quantities of weaponry were also taken by submarine to Sanussi-held stretches of the coast of Cyrenaica in eastern Libya. They included some Egyptian-born Ottoman professional soldiers who would play an important role in the subsequent Sanussi offensive into British-occupied Egypt. A few similar men had never left since 1912, and had remained to advise the Sanussi regular army. Meanwhile, the great majority of Sanussi fighting men were local tribesmen whose ability to operate effectively across the vast Sahara Desert came as a surprise to the Italian, French and British forces who nominally controlled so much of this territory.

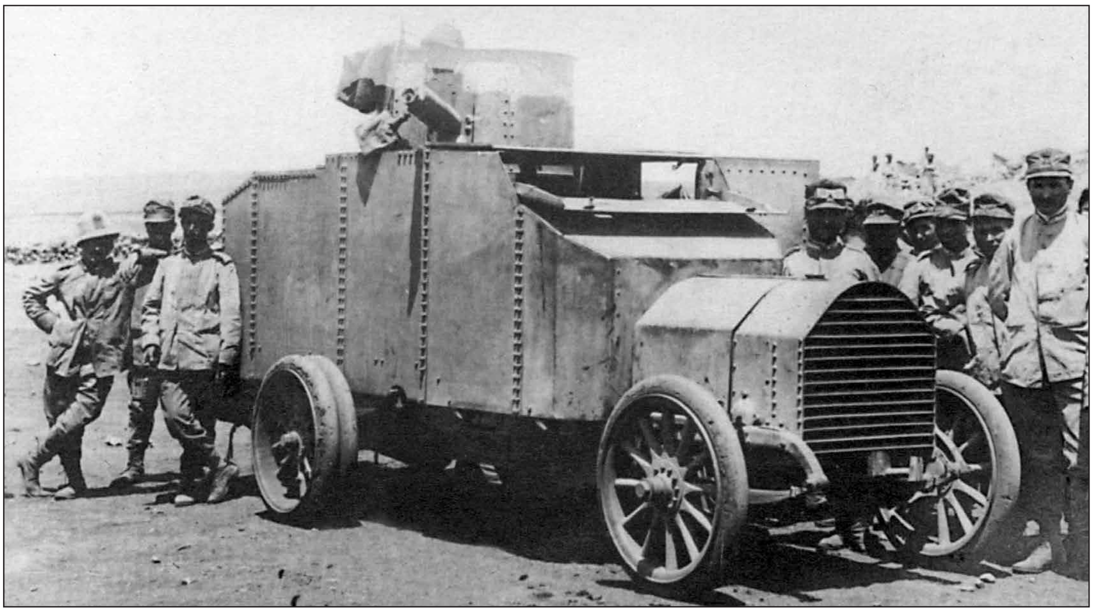
Once the Sanussi invasion of British-occupied Egypt had been brought to a halt in severe fighting, the British and Italians cooperated more closely in a joint strategy. This in turn enabled the Italian Army to assault the Sanussi heartland in Cyrenaica during the spring of 1916. For the Italians, this involved ambitious amphibious landings in conjunction with the Italian Navy as well as more straightforward Army columns of artillery and infantry. Meanwhile, Sanussi strength was to some extent undermined by determined French counter-attacks in other French colonies in North Africa and the Sahara. Similarly, the British and Egyptian expulsion of the Sanussi from Siwa, Bahariya, Farafrah and Dakhla forced the Sanussi leadership back to Jaghbub and the area around Sirt.

Aeroplanes, including more up-to-date Pomilio reconnaissance and bombing machines, would play an especially important role in cooperation with the Italian Army in western Tripolitania during 1917. By the start of that year Captain Alessandro Raffaelli of the 12th Squadron had under his command six pilots and three air-gunners who seem to have been specialists in attacking ground targets. On 10 January, they dropped bombs and flechettes, following up with strafing attacks, in close support of a force of pro-Italian irregulars who had been sent against those the Italians regarded as "rebels". On 16th, 18th and 19 June Azizia was again bombed. A change of command at the end of the summer saw Captain Attilio Gelli in charge of the still understrength Caproni squadron which now consisted of three aeroplanes, nine pilots and just one air-gunner. In autumn the unit's first somewhat underpowered aeroplanes, with their 300hp engines, were replaced by five Caproni Ca. 33s with 450hp. engines.

Meanwhile negotiations involving the British, the Italians and the Sanussi had started, though these only made progress after the most belligerent elements of the Sanussi leadership fled from Libya to the Ottoman Empire in a German submarine. In April 1917, the fighting finally came to an end with a truce known as the "Modus Vivendi of Akrama". This agreement satisfied the British and the Sanussi who retained control large areas in Libya. In contrast the Italians were far from happy with the Akrama Agreement because they still wanted genuine control of the whole of Libya. As yet there was little that Rome could do about it, though there was undoubted resentment in Italy, where there was a feeling that their British allies had let them down. Under the Modus Vivendi of Akrama the Italians also reluctantly agreed to supply the Sanussi with an additional 2,000 rifles, plus uniforms, money and even a battery of mountain artillery. This was on the understanding that the weapons would be used against pro-Ottoman "rebels" led by Ramadan al-Shtaiwi in Tripolitania.

Following the Modus Vivendi in April 1917 there was relatively little fighting in Libya. This would only change after the Italian Army halted a massive Austro-Hungarian and German offensive on the River Piave in northern Italy between 15-23 June 1918. Meanwhile Ramadan al-Shtaiwi, the Libyan resistance leader in Tripolitania, had already quarrelled with the Sanussi back in 1916. Nevertheless the Sanussi refused to attack him, despite having effectively agreed to do so under the terms of the Akrama Agreement, and having been given Italian war materials on this understanding. Being in such a weak position, the Italian Army largely left the Tripolitanian "rebels" in peace until the summer of 1918. Even Italian aeroplanes were relatively quiet during this period, though on 20 January the commander of the 12th Squadrigia, Lieutenant Adolfo Bianchi Crema, was injured in a flying accident.

Then, on 26 August, two Capronis bombed Suwani Bin Adim, followed in the first week of September by attacks on the enemy-held town Misurata and its radio station. The port of Misurata was important because it was from here that Libyan resistance forces received supplies from the Ottoman Empire aboard German submarines. On 18 September another "rebel" radio station at Bani Walid was attacked in a long-range raid against a target more than 130km from the Italian aerodrome outside Tripoli.



A Fiat-Arsenale armoured car in Libya, where the type was used from 1913 until at least November 1915. As the first armoured car to enter service in the Italian Army, it was based upon the highly successful Fiat 15 lorry. (Archivio Ufficio Storico Stato Maggiore)

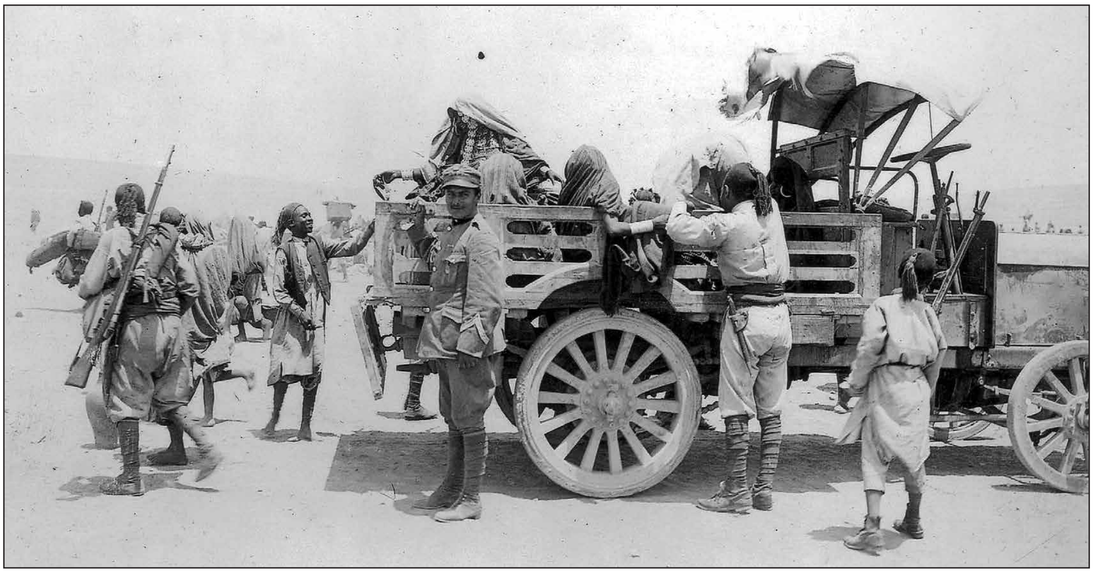
An Italian Maurice Farman MF 11, usually known to the Italians as a Farman Model 1914, landing at Benghazi on 8 September 1918. It was flown by Lt. Idalgi, probably of the 104th Squadrigia. (Ferdinando Pedriali Collection)

Cyrenaica also remained largely quiet during this period, though there was terrible suffering in the southern region of Fezzan following crop failures. Here food supplies ran out completely at the end of January 1918, being followed by the "Thirty-five Days of Hunger". This did not, however, mean that Italian flying units were withdrawn. In April 1918, the 104th Squadriglia with its Farmans was still based in the Benghazi Military Zone, with one Farman Sezioni or flight in the Cirene Military Zone, and another in the Tobruk Military Zone.

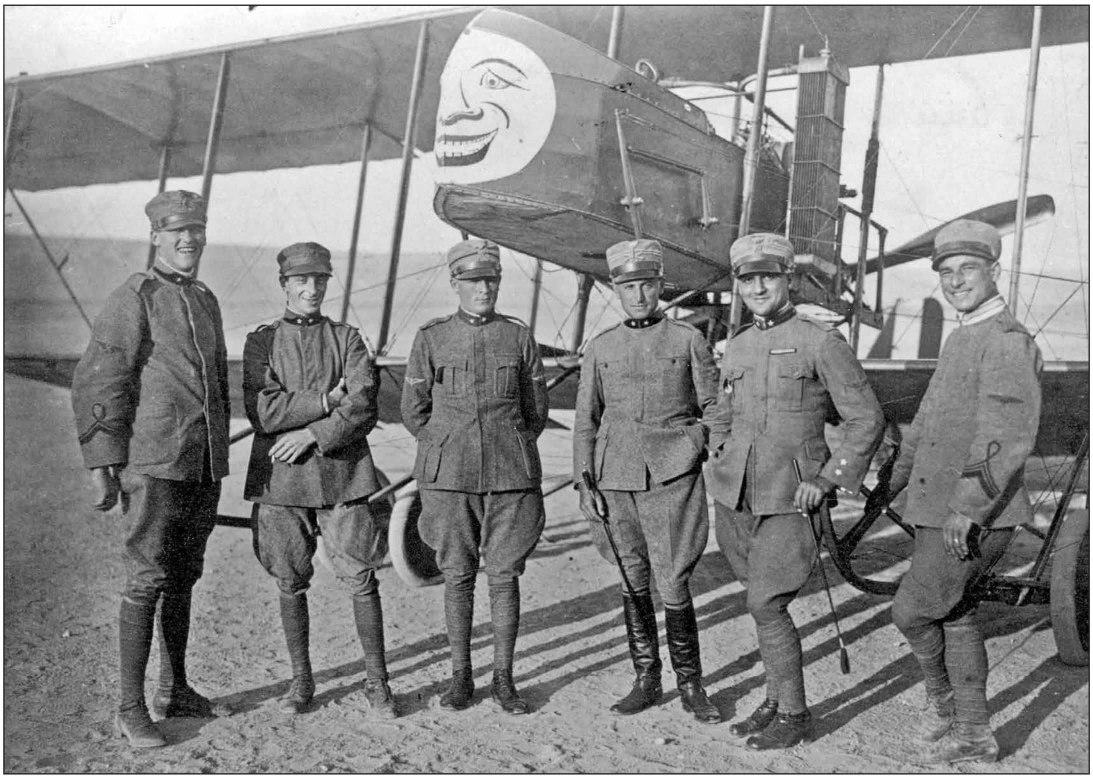
Victory on the River Piave in later June 1918, gave the Italian Army confidence to return to the offensive in Libya. A new campaign was therefore launched in Tripolitania. This soon entailed an intensive aerial bombardment of rebel-held Misurata on 25 July 1918, initially by Farmans and seaplanes but soon also involving large multi-engined Caproni bombers. General Ameglio was then replaced by General Vincenzo Garioni who landed in Tripoli on 8 August. He was tasked with restoring the Italian position in Libya before the First World War ended. However, he was expected to do with the troops already in the country, plus relatively few reinforcements which would soon arrive from Italy.

The Italian forces in Tripolitania were now reorganized in preparation for a major operation in late September and early October. This would again involve naval support plus a significant use of air power. The result was a number of localized but important successes. The Italians formed their forces into two columns under the command of Colonel Mezzetti. These caught enemy outposts at Zuwarah and Regdalinah by surprise and on 23 September pushed on to Qasr Talili. Here a substantial Arab "rebel" force had both artillery and machineguns but was nevertheless attacked from all sides, eventually retreating after suffering severe losses. Casualties on the Italian side were surprisingly modest.

During October the Libyans attempted to organise a counter-offensive against Zuwarah. To prevent this, Colonel Mezzetti established defensive positions along a frontline from al-Mangub, through al-Gamil to Regdalinah, backed up by a small mobile column on the



Libyan askaris of the Regio Corpo di Truppe Coloniani or Italian colonial army arriving in Tubruq (Tobruk) with their families in 1918. By the end of the First World War the Italian Army had nine battalions of locally recruited Libyan troops but they, unlike the more reliable Eritreans, were not allowed their own machinegun sections. (Museo Storico Aeronautica Militare, Vigna di Valle)



Another Maurice Farman MF 11, or Farman Type 1914 as it was known in Italian service, at Tubruq in 1918. The grinning moon face on the front of the nacelle might suggest that it sometimes operated at night. Tenente Armando Orlando of the 104th Squadriglia of the Corpo Aeronautico Militare is standing second from the right and wears his Medaglie al Valore or Medal for Valour. (Museo Storico Aeronautica Militare, Vigna di Valle)

coast at Zuwarah. There was also a force to support Zuwarah stationed on the hill of al-Mshaymin. This frontline was designed so that all sections could be supported by two strong artillery emplacements at Sidi Abd al-Samad. The anticipated Libyan attack came on the morning of 5 October when 3,000 Arab infantry and 1,000 horsemen under the command of the chief leaders of the resistance in Tripolitania attacked the Italian position at al-Gamil. Italian artillery at Sidi Abd al-Samad targeted the assault troops and the defensive line held. Meanwhile a mobile column from Zuwarah attacked the Libyan flank, forcing the enemy to withdraw.

The following day, Italian troops from the outposts around Tripoli advanced toward al-Ma'amura which had been taken by the "rebels", forcing the latter to retreat. The vanguard of the Italian assault in this battle consisted of the 4th Battalion of Sardinian Grenadiers. The fighting was intense and as a result two Silver Medals of Valour and five Bronze Medals were awarded to men of this Italian unit.

The battle continued on 7 October against rebel-held Misurata and Zliten, the Italians and their colonial troops again being supported by a naval bombardment. Aeroplanes also took a major role, specifically targeting the Ottoman advisors who were still helping the Libyan resistance. On 26 October 1918 the Italian column from Zuwarah, after marching along virtually the entire Italian held coastal strip, linked up with an Italian column from Tripoli in the oasis of Zanzur. It was a success which effectively brought this localized campaign to an end.

Away to the east in Cyrenaica, the period of the Modus Vivendi of Akrama saw Italian forces confined to another narrow coastal strip. On the other side, however, Sanussi political control had also shrunk by 1918, controlling little beyond the movement's spiritual centre in the large oasis of al-Kufra, deep in the desert of south-eastern Libya. The Italians' success in Tripolitania was accompanied by a comparable offensive in Cyrenaica. Here again aerial bombing played a major role, the first sorties being carried out by naval aeroplanes which were followed up by the same types of land based aeroplanes that had been used in Tripolitania. Under such pressure the current Sanussi political leader Ahmad al-Shafir fled the country and was taken to Constantinople in a German submarine in September 1918. His authority amongst the Sanussi was inherited by his cousin, Muhammad Idris Ibn Muhammad al-Mahdi as-Senussi. He would later reign as King Idris of Libya from 1951 to 1969.

An overview of the Italian position in Libya during the First World War highlights some interesting facts about this little-known sideshow. For example, the maximum number of troops the Italians had in their North African colony from 1915 to 1918 was about 60,000, mostly based around Tripoli. The Italian Army also suffered

A Caproni Ca. 32 or Ca. 33 heavy bomber of the 12th Squadrigia being used to carry Poste Italiana mail from the main aerodrome at Millaha outside Tripoli to isolated, sometimes virtually surrounded, Italian garrisons along the Libyan coast. (Archivio Ufficio Storico Stato Maggiore Aeronautica)

An undecorated Italian Maurice Farman MF 11, serial number MF 978, photographed at Tubruq aerodrome on 31 March 1918. The darker, green painted underside of the outer part of the wing is clearly visible. (Museo Storico Aeronautica Militare, Vigna di Valle)

higher losses in its North African territory than either the British in Egypt, or the French in the western Maghrib and Sahara. This is because Italian forces were the target of more prolonged and determined assaults. The Italian troops involved included elite light infantry Bersaglieri from the VIII and XV Battalions, plus elements from the 4th, 7th, 16th, 18th, 22nd, 23rd, 26th, 30th, 34th, 37th, 40th, 43rd, 48th, 50th, 52nd, 68th, 79th, 82nd, 87th and 93rd Line Infantry Regiments. In addition there were the militia of the 111th Battalion of Volontari Italiani. Cavalry were much fewer in number, being drawn from the Piacenza and Casarta regiments. There were also small numbers of engineers, artillery, mountain artillery, armoured cars, other support troops and some militarised Reale Guardie di Finanza, which was a frontiers and coastguard organisation.

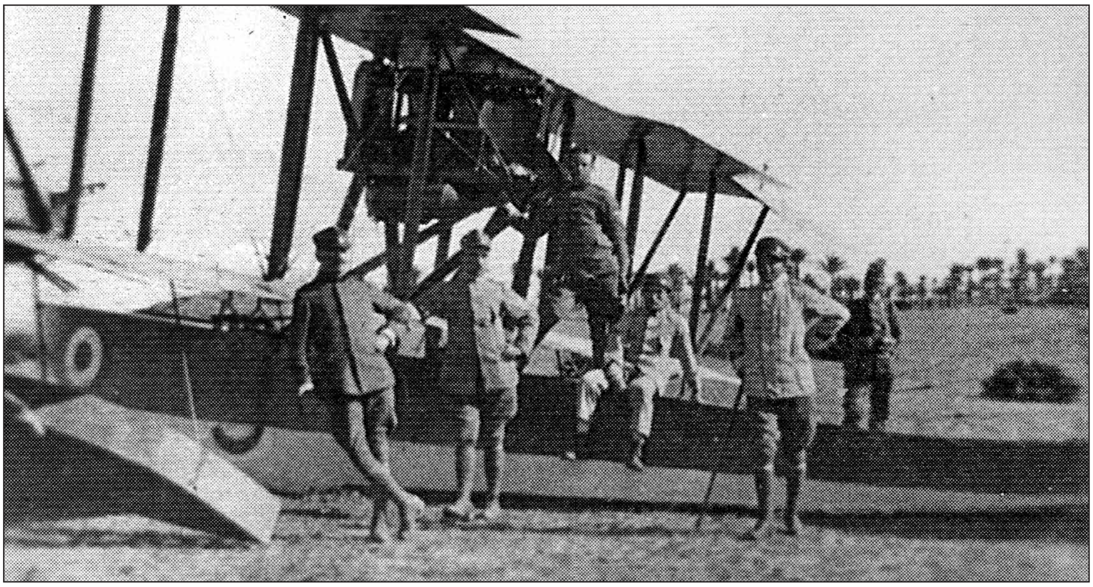
Alongside these men from metropolitan Italy there were substantial numbers of colonial troops from the Regio Corpo di Truppe Coloniani. They included the notably effective Eritreans, East African soldiers of the XIV, XV, XVI, XVII and XVIII Battalions. Less reliable were the locally recruited Libyan troops of the I, II, III, IV, V, VII, VIII, IX and X Battalions who, unlike the Eritreans, were not allocated their own machinegun sections.

Victory in Europe would free the Italians to concentrate on Libya. On the other side, the Ottoman Turks who had been helping Ramadan al-Shtaiwi in Tripolitania now left by submarine. Nevertheless, it would not be until 1922 that Italian forces finally established firm control in Tripolitania. Defeat of the Sanussi in Cyrenaica and Fezzan came even later (this will be covered in a later volume) and would involve an even greater use of Italian air power.

The Italians had faced significant problems in their East African colonies of Eritrea and Somalia during the course of the First World War. Back in 1906, thousands of Yemenis from the other side of the Red Sea and Gulf of Aden had been recruited as mercenaries. They were then given military training in Somalia. A few years later many of these men found themselves being sent to Libya to fight the Ottoman garrisons and subsequently the local Libyan resistance.

There were, however, no Italian air operations in Eritrea during the First World War, although the Italian Navy patrolled the southern Red Sea with up to four ships in 1917. In early 1918 Italian warships also bombarded the Ottoman held port of al-Luhayyah on the coast of Yemen. During the earlier part of the First World War, support for the anti-Ottoman Idrisid uprising in Asir just north of Yemen would have been a secondary consideration for the Italian authorities in Eritrea and Somalia. Here, as in French Djibuti and British Somaliland, events in neighbouring Abyssinia (now Ethiopia) were much more worrying. In this vast and independent kingdom, Ottoman agents from Yemen were stirring up feelings against the neighbouring Italian, British and French "imperialists".

Italian fears of raids or more substantial assaults from Abyssinia against their vulnerable colony of Eritrea heightened when Italy entered the First World War on the side of France and Britain on 23 May 1915. On the other side of the frontier the situation, in Abyssinia itself, changed dramatically during the First World War, especially when the Emperor Lij Iyasu (also known as Iyasu V) converted to Islam in September 1915. He also formed an alliance with Muhammad Ibn Abd Allah Assan, the so-called Mad Mullah of



The Italians were not alone in finding it necessary to use naval aeroplanes to reconnoitre or even to attack land targets in North Africa and the Middle East. Such operations naturally posed additional risks. Here an Italian FBA Type H flying boat, pennant 9 of the 286th Squadriglia of the Italian Navy's Servizio Aeronautico, has made a forced landing on land. (Courtesy of Paolo Varriale)

Somalia. Lij Iyasu even offered to put his country under the spiritual authority of the Ottoman Sultan-Caliph in Constantinople. Lij Iyasu's behaviour has sometimes been described as an indication of insanity, but in reality Lij Iyasu hoped to harness the warlike Somalis and the Muslim Galla tribes of eastern Abyssinia to crush the rebellious *rases,* or nobles, and thus unify his country. The Emperor also hoped for backing from the Ottoman forces in Arabia, especially those in Yemen, and even from German colonial forces in Tanganyika (now part of Tanzania).

On 5 January 1916 the commander of Italian Colonial Troops in Eritrea, Colonel Gherardo Pantano, presented the colonial government with a list of what he considered necessary to defend the territory against Abyssinian aggression. Despite a previous unfavourable assessment concerning the use of aircraft in this territory, Colonel Pantano stated that; "I think that a squadron of aeroplanes in the colony, used appropriately, would represent an element of (Italian) prestige and be a very considerable moral influence (upon the Ethiopians)." Pantano's request for aeroplanes was repeated several times during January, by which time it was being supported by the Colonial Governor in Asmara. Despite an emphasis on the moral impact which aeroplanes could have on essentially tribal Abyssinian forces, the request was again turned down in Rome where the Minister of War, General Zuppelli, pointed out that the machines were neither available, nor, in his opinion, was their use practical in such a region. The correspondence continued, and in a message to Rome on 20 May 1916, the Eritrean colonial authorities affirmed that; "to send a squadron of aeroplanes… will raise the spirit of Eritreans admirably, and at the same time depress that of the Ethiopians."

Later in 1916, in Abyssinia itself, Lij Iyasu's gamble failed and he was toppled by the aristocratic *rases* who were led by Ras Tafari Makonnen (the future, and indeed last, Ethiopian Emperor Haile Selassie) in September that year. Lij Iyasu's ally, the "Mad Mullah" Muhammad Ibn 'Abd Allah Assan, was attacked by British, French and Italian troops in Somalia. A month later Ras Tafari Makonnen led his private army into Abyssinia's largely Muslim province of Harar where they massacred a large part of the Muslim population, including many Somalis. This act would leave a legacy of Muslim Ethiopian bitterness against the dominant Christian Ethiopians which would bear fruit in 1935-36, and indeed persisted for many decades after that.

On 13 October 1916, the Italian Colonial Ministry in Rome finally agreed to send a squadron of aeroplanes to Eritrea, and received a go-ahead from the Italian Army command at Udine (facing the Austro-Hungarians in north-eastern Italy). By then, however, the Ethiopian crisis seemed to have passed and almost exactly a month later the idea of sending a single Farman pusher type machine replaced the previous plan to send a squadron. On 20 January 1917, the idea of building hangers for aeroplanes in Eritrea was again raised, but towards the end of the year it was again postponed, this time because the two hangers in question were more urgently needed in Libya, whereas the situation in Italian East Africa seemed to have stabilized. Consequently, aeroplanes did not operate in Italy's East African colonies until after the First World War had ended.

Despite his military victory, the twenty-five year old Ras Tafari Makonnen was widely thought too young to become the country's *Negus Negast,* or Emperor. Instead Zauditu, daughter of the previous Emperor Menelik, was proclaimed Empress while Ras Tafari became heir apparent and regent. Together they held power in the capital while aristocratic *rases* dominated the provinces. Ras Tafari's own powerbase was now in largely Muslim Harar, where his father Ras Makonnen had been governor and, like his father, Ras Tafari proved to be an enthusiastic moderniser.

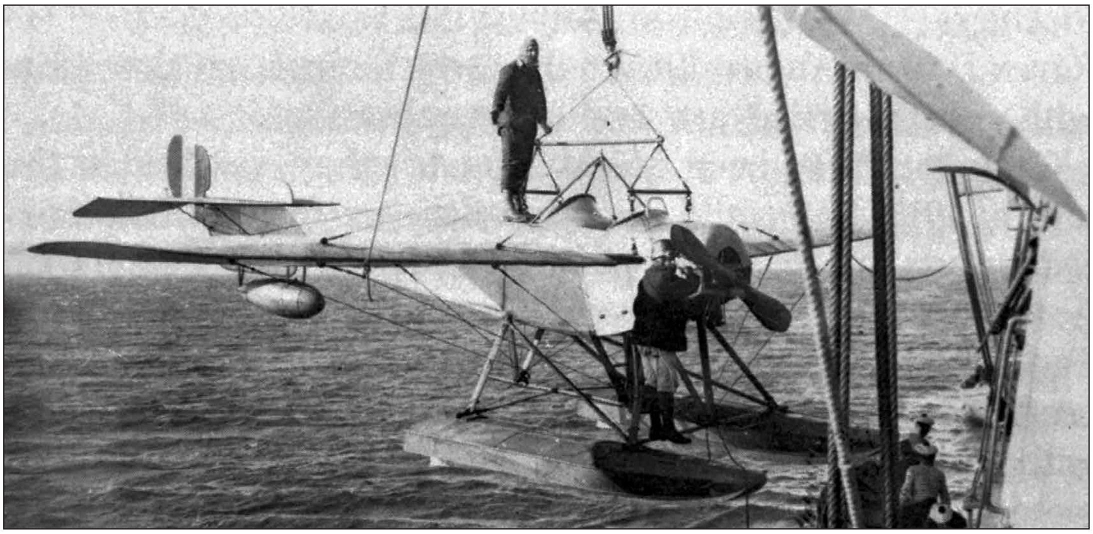
Meanwhile ex-Emperor Lij Iyasu fled to the Danakil Mountains of what is now southern Eritrea. The so-called "Mad Mullah" was recognised by the Ottoman government as ruler of Somalia in 1917 where he was not as isolated as might be supposed. On the other side of the Gulf of Aden, the Ottoman Turkish General Ali Sa'id Pasha currently penned a British garrison into a tiny enclave around Aden; he also continued to smuggle guns to the Somali "rebels" throughout the First World War.

In Italian Somalia itself, the powerful Sultan of Hobyo and his private army, along with several other Somali coastal tribes, remained loyal to the Italians. This allowed the Italian army's Regio Corpo Truppe Coloniali (Royal Corps of Colonial Troops) to develop into a highly effective force during 1917. They would be needed during the inter-war years.

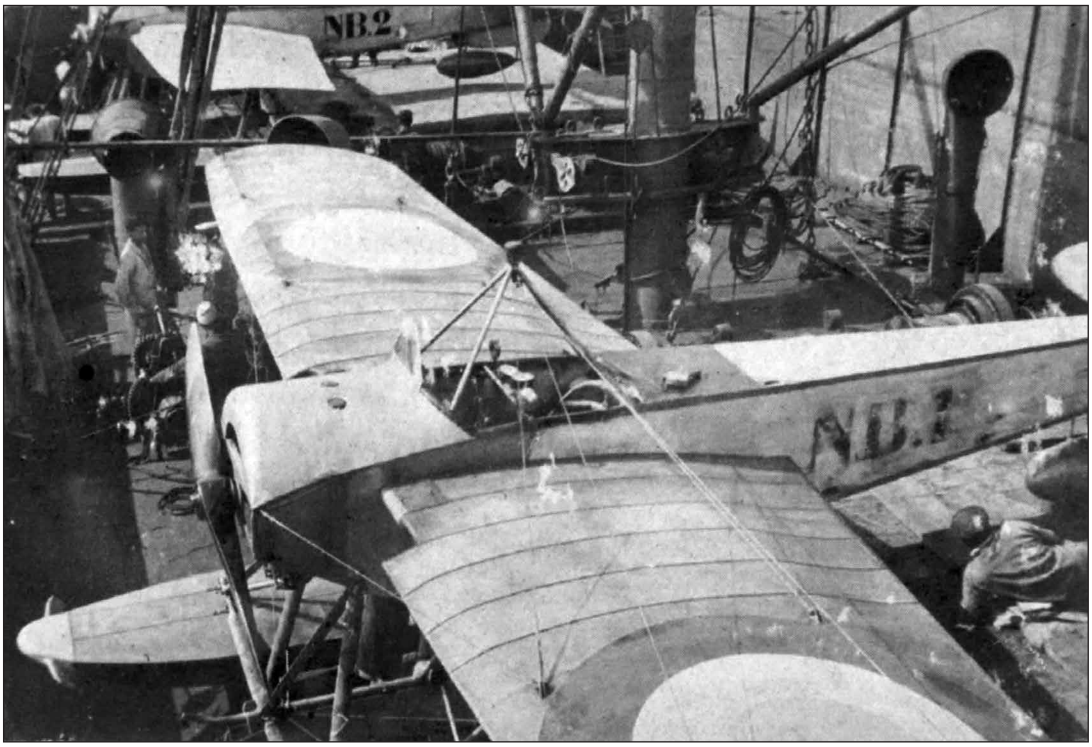
4

THE FRENCH IN THE LEVANT AND NORTH AFRICA

The French Nieuport VI Hydro seaplanes which supported the Anglo-Egyptian defence of the Suez Canal from 5 December 1914 were the first, and for a time the only, unit of French maritime aviation to be deployed outside Europe. Crewed by French pilots and British observers, these Nieuports were the same machines



An as yet unnumbered Nieuport seaplane being hoisted aboard the French Navy's newly converted seaplane tender *Campinas* near Port Said in March 1916. Here Lieutenant de Vaisseau Marcel-Antoine Destrem is seen standing on the Nieuport's float strut. Later in 1916 the *Campinas* was re-equipped with six FBA flying boats while the French Navy's Nieuport seaplanes were initially put aboard two Royal Navy seaplane tenders, HMS *Doris* in the Mediterranean and HMS *Minerva* in the Red Sea. (Coll. ARDHAN)



French Naval Nieuport seaplanes, aboard the British seaplane tender HMS *Anne* early in March 1916. They still have the numbers NB.1 and NB.2 given to them while based at Brindisi in Italy from September 1915 to January 1916, before this unit was transferred to Port Said in Egypt. NB.1 would be lost at sea due to engine failure on 13 March, though its pilot Sec. Maitre Emile Alfred Jeanblanc and his observer were rescued. (Coll. ARDHAN)

which had originally been built for the Ottoman Navy. In addition to supporting the defence of the Suez Canal they would keep watch upon the coasts of Ottoman Palestine, Syria, the northern Red Sea and part of what is now southern Turkey before being redeployed to Greece early in April 1916. In fact, after the immediate threat to the Suez Canal had apparently, passed, the French Navy's Nieuport seaplanes were put aboard two Royal Navy seaplane tenders, HMS *Doris* in the Mediterranean and HMS *Minerva* in the Red Sea.

Naval aviation would remain tactically and strategically vital for the Allied war effort in the Middle East. Here the British and French navies enjoyed complete domination of the Eastern Mediterranean. This in turn meant that Allied seaplane tenders could cruise off almost any Ottoman coast that they chose. One of these vessels with the Royal Navy's famous *Ben-my-Cree*, commanded by Charles L'Estrange. He worked closely with Colonel P.G. Elgood, the historian, author, soldier and administrator who was the British base commander at Port Said in 1915. Together they established a seaplane base on a small island in Port Said harbour. This was to serve as an administrative and maintenance centre for the Allied naval flying units.

Meanwhile the French Navy's Centre d'Aviation Maritime (CAM) at Port Said was on board the French seaplane carrier *Foudre* which arrived on 30 November, having previously been operating off Montenegro in the southern Adriatic since the start of the war in August. The French seaplanes' first mission was on 5 December 1914, along the coast to al-Arish. They saw enemy cavalry, were fired upon and hit several times, but nevertheless brought back a timely warning to General John Maxwell. Such patrols continued, along with reconnaissance flights to the Gulf of Aqaba. Some of the machines were put aboard the Royal Navy ships *Doris* and *Minerva*, along with British observers who had experience of desert reconnaissance. *Doris* then operated along the Mediterranean as far as Alexandretta (Iskenderun) while *Minerva* operated in the Red Sea, both ships continuing in these roles throughout 1915 into early 1916.

Two German merchant ships, *Anne Rickmers* and *Rabenfels* had been seized in Alexandria at the start of the war. Both were then modified as seaplane tenders during January 1915, *Anne Rickmers* thereafter simply being called the *Anne*. She remained in the Mediterranean whereas the *Rabenfels* was renamed *Raven II* and was sent to the Red Sea. Two Nieuport seaplanes were put aboard each of the ships, and from these floating bases their crews kept a close watch on Ottoman forces in Sinai, Palestine, Syria and the Red Sea coast of Arabia. Nieuport seaplanes played an equally important role during the Ottoman assaults against the Suez Canal, not only carrying out reconnaissance but also attacking the enemy with bombs and flechettes.

Later it was decided that the British seaplane tenders *Ben-my-Cree* and *Raven II* would operate British seaplanes, while the

Col. Bremond, the Commander of the French Army in Orient, with Amir Faisal in 1917. Bremond already had seven years experience of service in Morocco when he was given command of a substantial unit of Muslim North African colonial troops under Muslim officers whose initial role was to advice and train the newly formed regular forces of the Arab Revolt. (Lieut. Colonel Y. Jouin archive)

Anne continued to operate the French machines. The latter were, however, still flown by French pilots with British observers in an arrangement, which lasted until the end of April 1916. The *Anne* left for a refit in Malta. Meanwhile three seaplanes were aboard the *Anne* when it went to Gulf of Smyrna (Izmir) where Admiral Peirse was bombarding the coastal forts in early March 1915. However, it was during this operation that the *Anne* was disabled by the Ottoman Navy's torpedo boat *Demir Hissar*. The *Anne* was then given temporary repairs at Mudros before returning to Port Said. During June 1915, French seaplanes and their crews in the Middle Eastern theatre had been placed under the rather distant Centre d'Aviation Maritime at Saint-Raphael in the south of France before being administratively transferred to the Admiral commanding the French 3rd Naval Squadron.

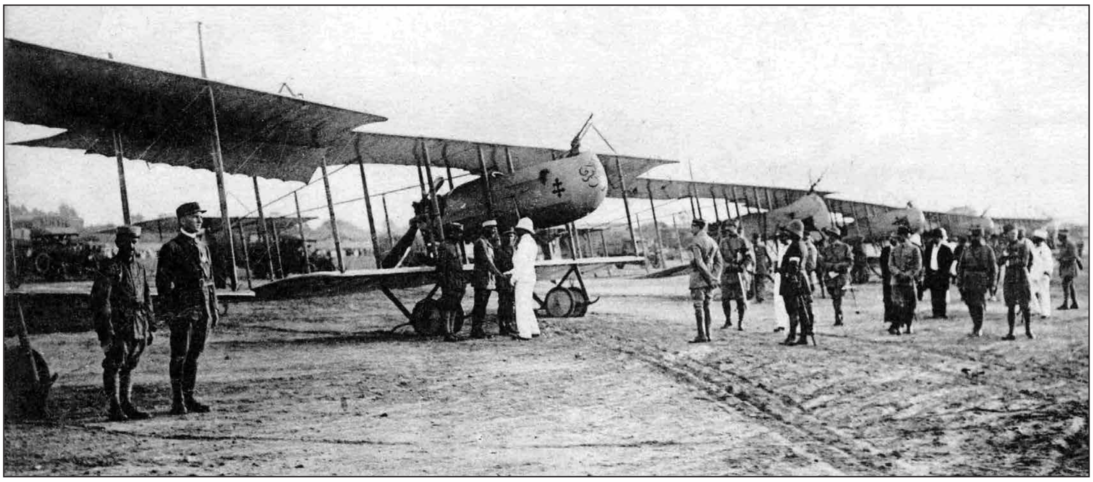
Thereafter the French Naval Nieuports briefly operated from Lake Manzalla near Port Said before being transferred to a new front in northern Greece. There were never more than seven French seaplanes in, or operating from, Egypt. Two were lost, but their contribution to the defence of Egypt was fully acknowledged by both British and Egyptians, with the poet Ahmad Shawki addressing one of his poems to them. It is interesting to note that Shawki did not address a poem to British airmen, which probably reflected Egypt's conflicted sympathies at the time.

The French Navy continued to play a leading role in the eastern Mediterranean throughout the rest of the Great War, even landing troops to capture the Syrian island of Arwad (Ru'ad) in September 1915. However, from spring 1916, the role of French Naval aviation was confined to the Aegean. Nevertheless, the Sykes-Picot Treaty of May 1916 revived the idea of establishing a French aerial presence in the Levant, especially as the Ottomans were thought ready to collapse in Syria, Mesopotamia and Arabia. Its creation would take a long time and would be severely hampered by growing British and French rivalry over the future fate of the Middle East.

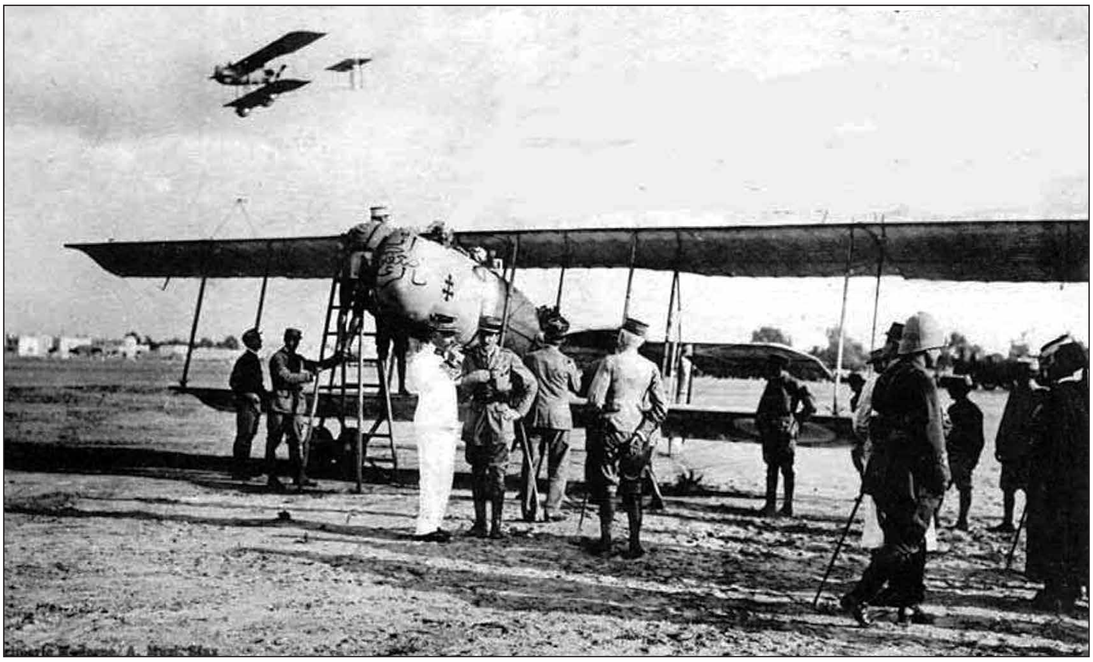
There was, of course, already a small French military presence in the form of "Lawrence of Arabia's French allies" in Arabia. The role of a French expeditionary force – largely consisting of Muslim colonial troops – in support of the Arab Revolt was played down by T.E. Lawrence, who seems to have disliked the French almost as much as he disliked the Turks. Its main role was in training and providing technical support for Sharifian regular troops during the Arab Revolt. Initially the French government had proposed sending six Muslim representatives to Sharif Husain, leader of the Arab Revolt, as a political move. Two each were to be drawn from Morocco, Algeria and Tunisia. There was also to have been a group of military advisors drawn from Muslim North African colonial troops under three officers, one artillery, one infantry and one cavalry; all to be headed by Colonel Bremond who already had seven years of experience from service in Morocco. He would be accompanied by Lieutenant Colonel Cadi of 113 Regiment of Heavy Artillery from Algeria, Captain Raho of 2nd Algerian Spahis, Captain Regueig Saad of the same regiment, and Lieutenant Lahlou who currently commanded the elite Black Guard infantry of the Sultan of Morocco. Captain Raho would, in fact, become so dedicated to the Arab Hashemite cause that he stayed on after the Great War, dying in the service of Emir Abdullah in 1919.

Unfortunately, the British were opposed to the whole idea of French interference in Arabia, but at the same time they themselves still refused to give the Sharif's forces adequate military help. Nevertheless, a French unit was hurriedly raised and was sent to Suez in Egypt during October 1916. It was a small but balanced and potentially potent force including machineguns, artillery, mountain artillery and engineers. With this a Military School was to be established at Mecca with French North African, Egyptian and ex-Ottoman Arab regulars as instructors. Also present in the military entourage of the Amir Abdullah was another Frenchman, Captain Depui, who had converted to Islam during his earlier colonial service and had recently distinguished himself in defence of Verdun during October 1916 as part of the French Somali Battalion. Dupui would again distinguish himself during the Arab Revolt's siege of Ottoman-held Madina. Despite Lawrence's comments to the contrary, Captain Pisani who was in charge of the French artillery and engineers attached to the Arab Northern Army, proved to be a highly effective officer. Most of the junior officers and NCOs were Arabic speakers from North Africa. They led some 200 ordinary North African soldiers.

On 25 April 1917, the Détachement Français Palestine-Syria was also formed at Port Said in Egypt. Commanded by Colonel Piépape it would eventually be an expeditionary force of around 7,000 men. However, its equipment remained relatively light and was in no way comparable to that of Britain's Egyptian Expeditionary Force. The Order of Battle of the Egyptian Expeditionary Force placed these Frenchmen within General Allenby's General Headquarters Troops.



French military aeroplanes had been withdrawn from North Africa at the start of the First World War, and would not return until 1916. The Farman F 40s of Escadrille F 301 arrived in Tunisia in July that year and were sent to a new aerodrome at Qabis (Gabes), not far from the frontier with nominally Italian Libya. They are seen here during the formal opening of that aerodrome on 26 August 1916, and one of the machines is actually an MF 11. (Jarrige Archive)



A Farman F 40 of Escadrille F 301 at Qabis (Gabes) in southern Tunisia, probably during the ceremony and display when that aerodrome was formally opened. In fact the F 40s had already been undertaking operational, training and bombing exercises over land and sea since 16 August. (Jarrige Archive)

Escadrille F 301 in southern Tunisia during the campaign against largely Arab "dissidents", mostly coming across the border from Libya where Italian control still did not extend much beyond a coastal enclave around Tripoli. The unit's MF 11 is again visible. (Jarrige Archive)

In fact, this French Detachment largely consisted of infantry: the 9th Battalion of 2nd Algerian Tirailleurs, the Regiment Légion d'Orient (recruited from Armenians and Syrians) consisting of 1st and 2nd Battalions Armeniens, and 23rd Companie Syrien, and 3rd Battalion Légion d'Orient (recruited from Armenians and others). There was also a small cavalry element consisting of two squadrons of 1st Regiment of Spahis and two squadrons of 4th Regiment Chasseurs d'Afrique.

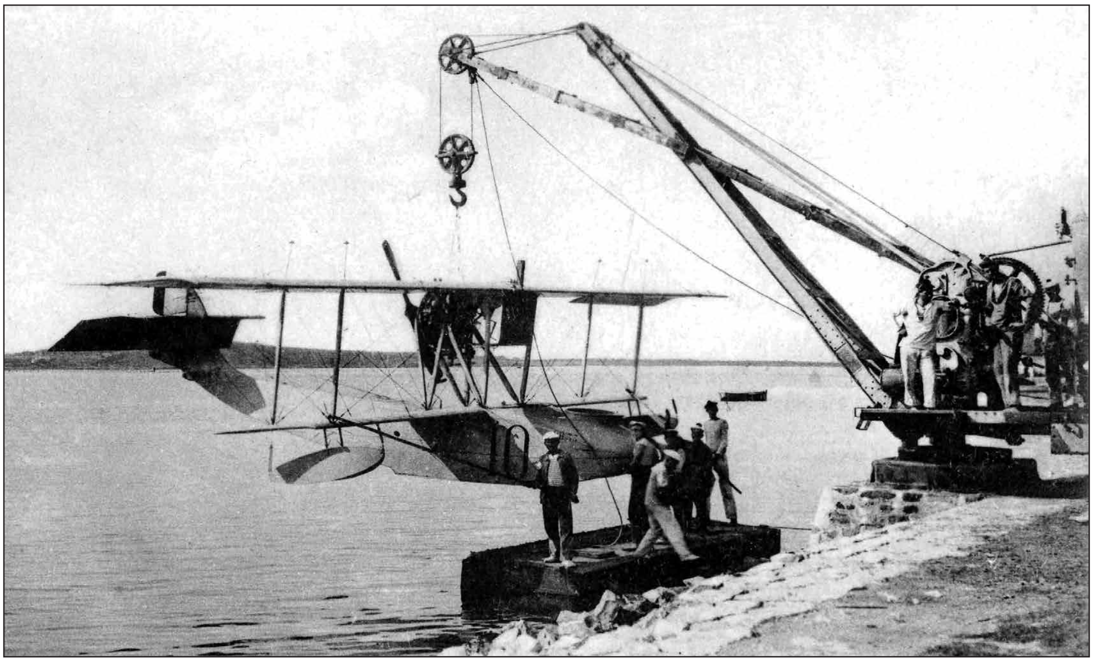
These men were, of course, soldiers, not airmen. Yet their success encouraged the French government to revive the idea of establishing an aerial presence in the Middle East. By 1918 a squadron of Caudron bombers was considered a suitable candidate to "fly the French cockade" in Syria and to strengthen what was undoubtedly still a weak French presence. So, on 9 March 1918, Jacques-Louis Dumesnil, the Undersecretary of State for Military and Naval Aviation, decided to send a Flight of the French Army's Service Aéronautique to Palestine. It should have fourteen aeroplanes, 10 for operational use with four in reserve, three officer pilots including the unit commander, six NCO pilots, nine observer bomb-aimers, plus support personnel, making a total of sixty-seven men. Though little thought seems to have been given to the special climatic and geographical characteristics of this front, twin-engined, three-seater Caudron G6s, powered by 110hp. Le Rhone engines, were chosen as its aeroplanes. Meanwhile the new formation was designed Escadrille C 575, the initial C standing for Caudron.

Nor were the men given any special training for service in the Levant: they were drawn from French squadron number 581, which had been serving in Russia prior to the Russian Revolution and which had then been withdrawn to France early in 1918. Having changed its equipment, this formation now changed its theatre of operations from the frozen fields of Russia to the dusty mountains of the Syrian front. It set off for Egypt on 11 July 1918; the first detachment to go being a sergeant, seven corporals and 59 men. A new commander had yet to be appointed and it was not until early August that Captain Braquilanges, the former CO of Escadrille Br 222, took over. Mechanics and administrative staff then set sail from Marseilles with light equipment and some aero-engines on 8 August, arriving at Port Said on the 27th. Meanwhile the pilots and their commanding officer also set sail from Marseilles, just as Colonel Piépape's soldiers in Palestine defeated three enemy battalions to capture the town of Nablus. In fact the Ottoman collapse in Palestine, Syria and Lebanon came so rapidly that the French air squadron had no time to organize itself, reach the front and take part in the final victory. Thus Escadrille C 575 was still awaiting its Caudron G6 aeroplanes when the war in the Middle East ended.

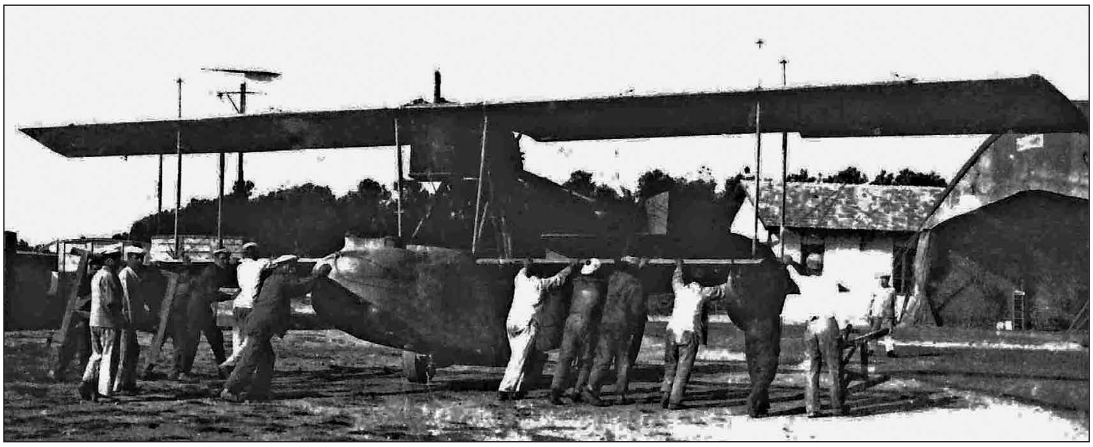
The activities of French airmen in North Africa during the First World War is perhaps even less well known than those in the Levant. At the outbreak of the First World War French military aviation in North Africa came to an abrupt end. Everything had to focus upon the struggle against the German Empire on what became the Western Front. The conflict was nevertheless expected to be short, though fierce, and the defence of France's colonies was not a priority. Nor did the primitive military aviation capabilities of 1914 seem to have much to offer in such vast and widespread territories. Even the bombardment of the Algerian ports of Philippeville (Skida) by the German battle-cruiser *Goeben* and of Bone (Annaba) by the light cruiser *Breslau* on 3 August did not seem to have anything to do with aeroplanes.

However, as the war dragged on and the appalling casualties rose even further, French reliance on troops from its North African colonies also grew. These had to be transported by ship from North Africa to France, and the vulnerability of such vessels to submarine attack became increasingly obvious. An astonishing increase in the power and capabilities of military aviation during the course of the Great War, along with an expansion of the arenas of conflict, also made a return of military and naval aeroplanes to French North Africa almost inevitable.

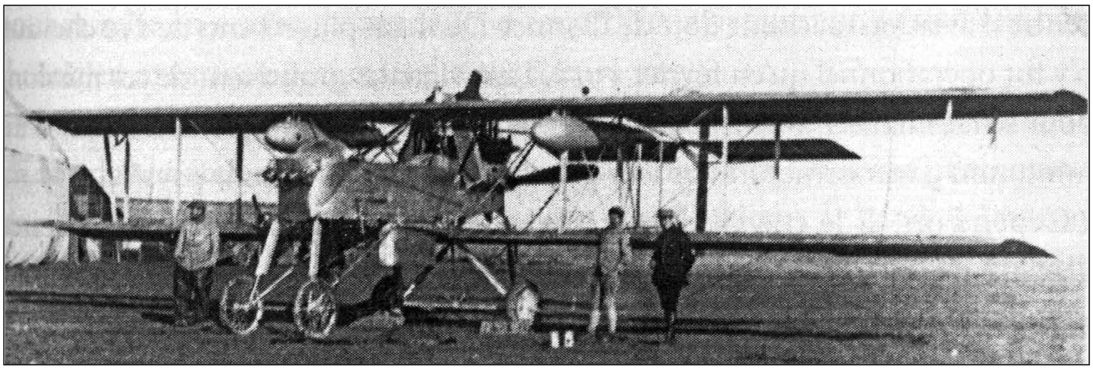
The Muslim populations of France's colonies remained almost entirely unresponsive to the Ottoman Sultan Caliph's call for a Holy War against the colonial powers and it was not until 1916 that



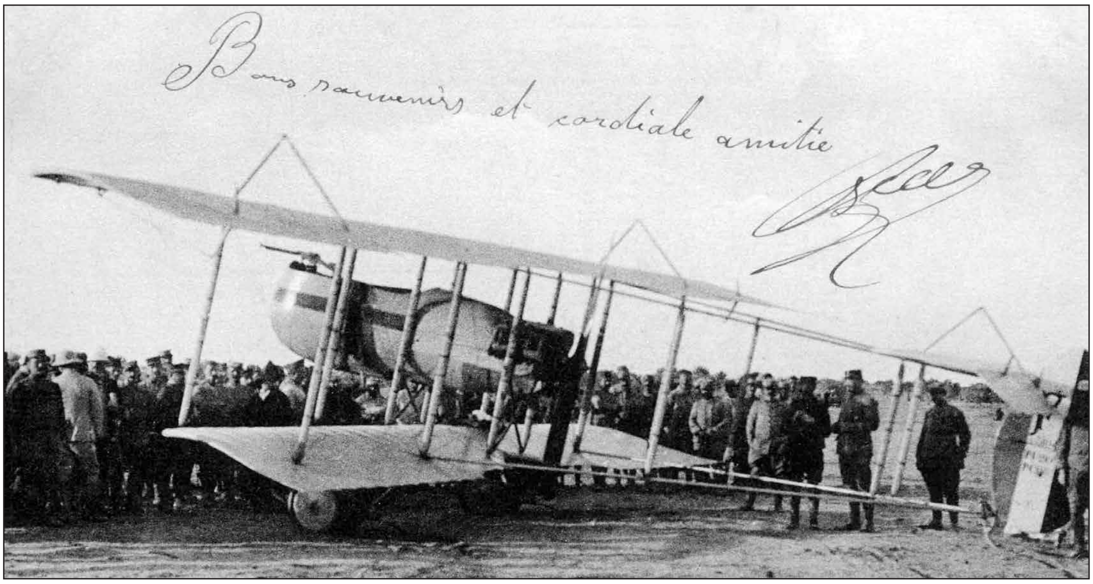
A Donnet-Denhaut powered by a 160hp Canton-Unné engine being lowered into, or raised out of, the water at the major French naval base at Binzart (Bizerte) in northern Tunisia. It only has one pair of interplane struts each side, which was a characteristic of the first thirty machines to be built, this being construction number DD33. (Jarrige Archive)



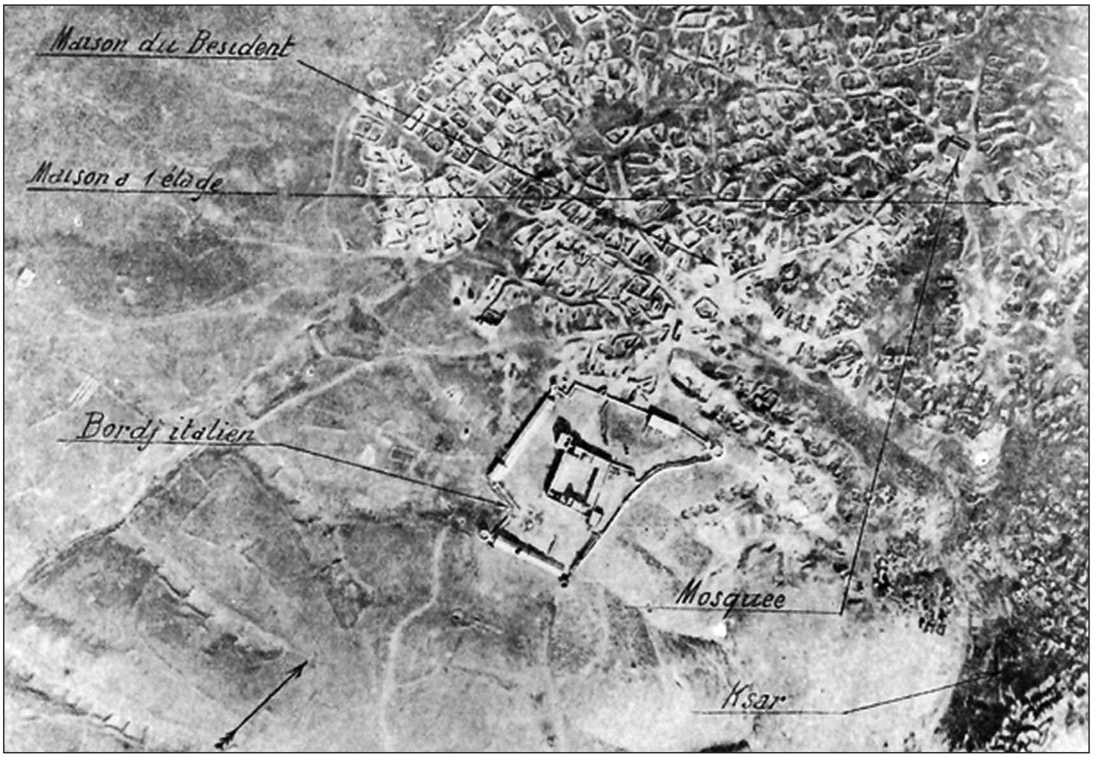
A Donnet-Denhaut 160hp flying boat being pushed back into its hanger at Binzart (Bizerte), home to the French Navy's Centre d'Aviation Martime (CAM) de Bizerte. (Jarrige Archive)



One of the Voisin-Renault Type VIII machines operated by Escadrille VR 302 in Morocco since 10 May 1916. This was the first French squadron to return to Morocco after French military aeroplanes had been withdrawn to France at the outbreak of war in 1914. Escadrille VR 302 had 10 such Voisin aeroplanes, 10 pilots, 10 observer-gunners, three NCO technicians, 70 troops and other specialists, as well as its own photographic section. (Section Air du service historique de la Défence)



Farman F 40 at Bin Qardan (Ben-Gardane) in Tunisia during a visit by Gen. Robert Nivelle who took over as Commander in Chief of French forces in North Africa in December 1917. It was probably part of Escadrille F 542 (ex-F 308). Escadrille F 301 had also been renumbered as F 541, and together they continued to patrol the Libyan border, looking for and when necessary attacking hostile forces. (Jarrige Archive)



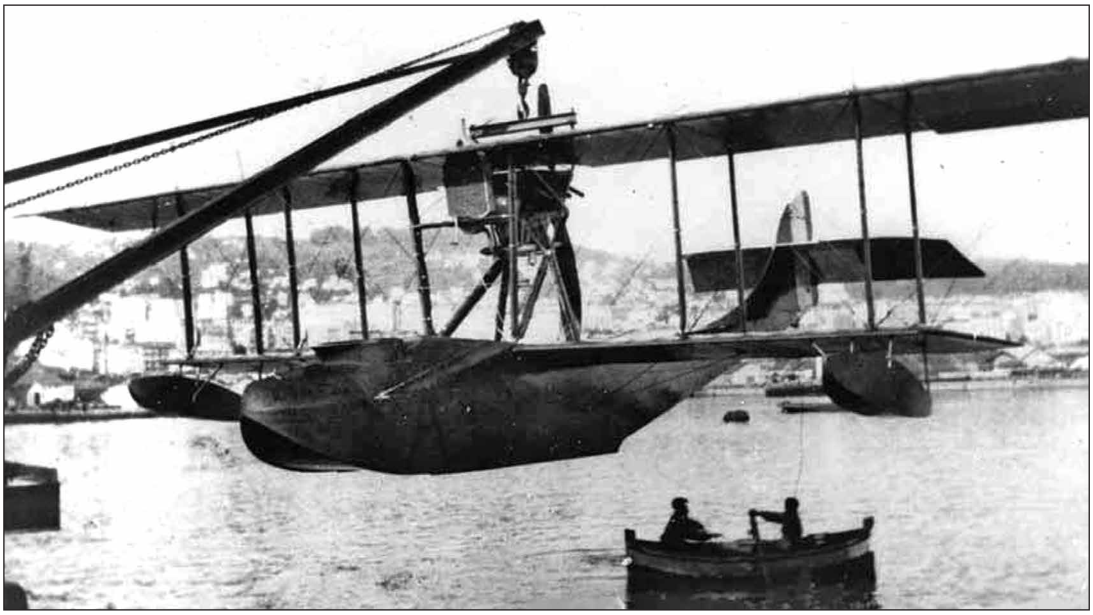
A French aerial reconnaissance photograph of Nalut in nominally Italian Libya, probably taken early in 1916. Lying roughly midway between Tripoli and the frontier oasis of Ghadamis, Nalut was the powerbase of the dissident leader Khalifa Ibn Askir. Such photographs made subsequent bombing raids possible. Unfortunately the latter also involved the dropping of poison gas. (Pierre Jarrige archive)

serious trouble flared up in the French Sahara. Meanwhile to the east, the Ottoman invasion of Egypt and its abortive assaults upon the Suez Canal, followed by Italy's entry into the world conflict and the British and Italian campaigns against the Sanussi, had already brought war to the southern Mediterranean littoral. Thereafter the Central Powers of Germany, Austria-Hungary, the Ottoman Empire and Bulgaria naturally wanted to divert as much as possible of their enemies' resources and attention to North Africa. German and Ottoman propaganda had flooded into these regions since late 1914, reaching a peak in 1916. Even the success enjoyed by the French against a Sanussi force at Oum Souigh in October 1915 failed to restore the situation. Instead, in November 1915, the Sanussi decided to increase their efforts against the British in Egypt. By the end of that year the three Allied colonial powers were facing a desert revolt which spread from Egypt's Western Desert to southern Tunisia.

The year 1916 saw the high-water mark of Italian and French difficulties in the Sahara. In was in this difficult situation that military aviation returned to French North Africa, just as it was being used with some success in Italian Libya. In both cases it was the aeroplanes' growing reliability, offensive capabilities and range – both tactical and strategic – which attracted the attention of colonial military commanders. The far greater struggles on the European mainland had already proved that any significant future military operation on land demanded control of the air. In North Africa, with the exception of Egypt, the Allies faced no enemy threats in the air; only the inherent difficulty of the climate and terrain.

Paradoxically, the urgent need to constantly replace outdated equipment on the Western Front meant that an increasing number of aeroplanes of earlier design became available for use in French North Africa. These remained useful in areas where there was no opposition in the air and had, of course, already been paid for. So the Ministry of War in Paris decided to send five flying units back to Morocco and Tunisia where the need seemed most urgent. Here the situation had clearly changed since 1914. In March 1916, General Hubert Lyautey, the French Resident in Rabat, reported that the strength of dissident elements had grown. Furthermore, they had seemingly received some military supplies from the Germans. He insisted to General Gallieni, the French Minister of War, that it was time to send French aeroplanes back to Morocco.

At the same time, however, the ferocity of the Battle of Verdun (21 February to 18 December 1916) was putting immense strain on French flying units, which were in danger of being driven from the air by their German opponents. Under such circumstances it was not possible to send men or machines to the colonies. So it was not until the French Service Aéronautique regained some control of the skies over Verdun in early April 1916 that the demands of



A Donnet-Denhaut 150hp being lowered into Algiers harbour in 1917. The letter A of its pennant number, indicating its attachment to the CAM at Algiers, is visible though the number is not. The letter A was only used between March and June 1917. (Jarrige Archive)

North Africa could be seriously considered. Deeper into the Sahara Desert, small and scattered French garrisons were now facing open warfare after Sanussi successes against the Italians in neighbouring Libya. These successes had given the Sanussi confidence to take their struggle against European imperial domination into territory claimed by France. Here they were supported by the Arab Shamba tribe, which had largely thrown off its allegiance to the French, and by the fearsome Berber Tuareg tribal confederation which had never really accepted French imperial domination in the first place.

The situation still seemed alarming in Tunisia, which lay closest to Libya and more especially to the fighting currently raging in Tripolitania. Here the Italians had been forced to evacuate most of their border posts along the Tunisian frontier and now had their backs to the sea. Consequently the French War Minister considered establishing a squadron, to be numbered 301, especially to operate in southern Tunisia. If necessary it would also operate over the frontier in nominally Italian Tripolitania. In practice two flights would be combined, resulting in a squadron with 10 aeroplanes being organized in spring 1916. In Egypt, meanwhile, the British had won a decisive victory against Sanussi forces at Sollum, with armoured cars and aeroplanes as well as more traditional camel-mounted infantry playing a significant role.

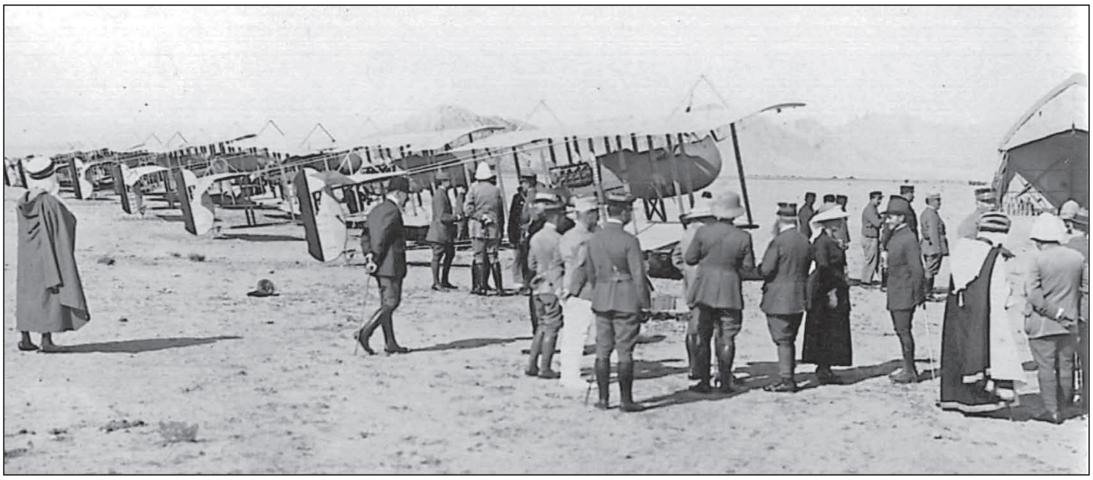
The examples provided by the British and Italian air forces, as well as renewed Sanussi attacks on French positions in March 1916, clearly encouraged the French to speed up their own deployment of air assets. There was then a moment of uncertainty, following the resignation of Joseph Gallieni as the French Minister of War on 15 March 1916. He had long been an ardent exponent of military aviation and of its role in pacifying colonial territories. Fortunately his replacement, General Pierre-Auguste Roques, held the same views. Thus the squadron assigned to southern Tunisia was authorized on 11 April.

This was a brave decision, with the survival of France still undecided at the Battle of Verdun. Furthermore, the French airmen sent to North Africa were specially selected for their experience and possession of suitable skills, with Captain Lafargue being placed in command of French flying units in southern Tunisia. He, of course, already had pre-war experience of air operations in the desert and semi-desert terrain of North Africa. It had also been decided that aircrew, whose harsh experience on the Western Front made them deserving of a quieter posting, provided a pool of potentially suitable men. The candidates should, therefore, have already served at least six months on the Western Front, or in Russia or in Romania. Where these experienced officers were concerned, medical standards were lowered. Nevertheless, their technical expertise had to be at least as high as that demanded on other fronts.

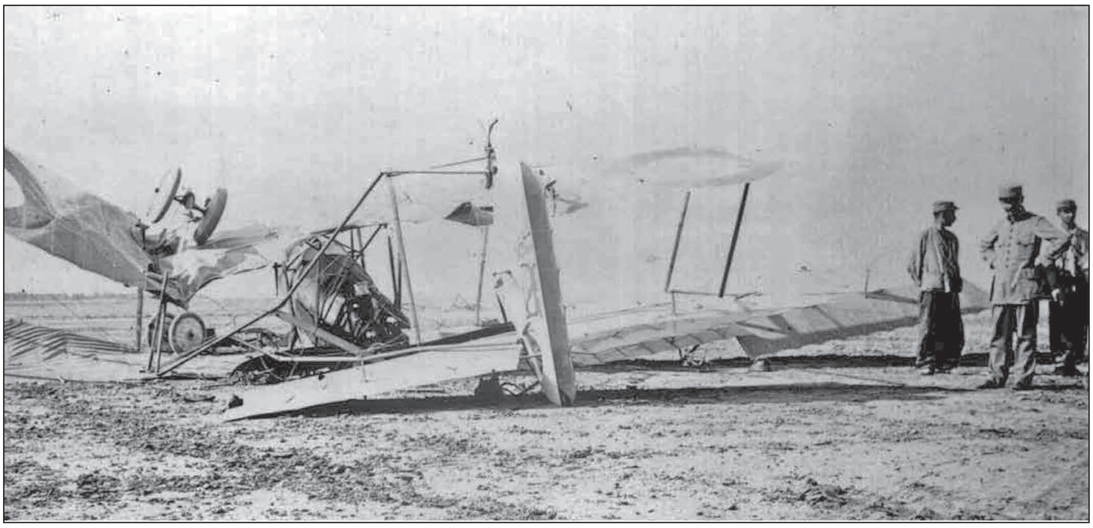
Escadrille F 301 was created in France on 24 May 1916 and was equipped with Maurice Farman MF 41 pusher type aeroplanes. It arrived in the major Tunisian naval base of Bizerta with its first six aeroplanes on 10 July. An Aviation Park and Aeronautical Reserve was also sent, in order to give French military aviation in Tunisia some degree of autonomy. F 301's primary role would be long-range reconnaissance, followed by offensive sorties against enemy concentrations and their leadership, both military and spiritual, if they could be located. It was also hoped that repeated French reconnaissance sorties and the dropping of propaganda leaflets on enemy camps would demoralise a largely tribal foe which had traditionally been accustomed to being able to "disappear into the desert."

The French escadrille was installed near Qabis (Gabes) on the southern part of the Tunisian coast, along with some small ships of the French Navy. This location was suitable because it was a railway terminus, port and point of departure for caravan routes into the deeper desert. Two hangers were planned for an eventual total of 10 Maurice Farman MF 41s, along with five buildings as barracks for the men. After making short local flights to get the escadrille operational, training and bombing exercises on land and at sea began on 16 August 1916. Twelve days later, following an inspection by senior officers and officials, F 301 was declared operational and ready to move to an airfield next to General Alix's forward base at the Berber settlement of Tattawin. Because it stood at the end of the modern road from Qabis, this forward aerodrome could be easily resupplied. Furthermore there were a number of important enemy targets within the limited range of the aeroplanes now based there. An airfield even further from the coast might have brought more of the enemy within range, but would itself have been vulnerable to being cut off from the main base at Qabis.

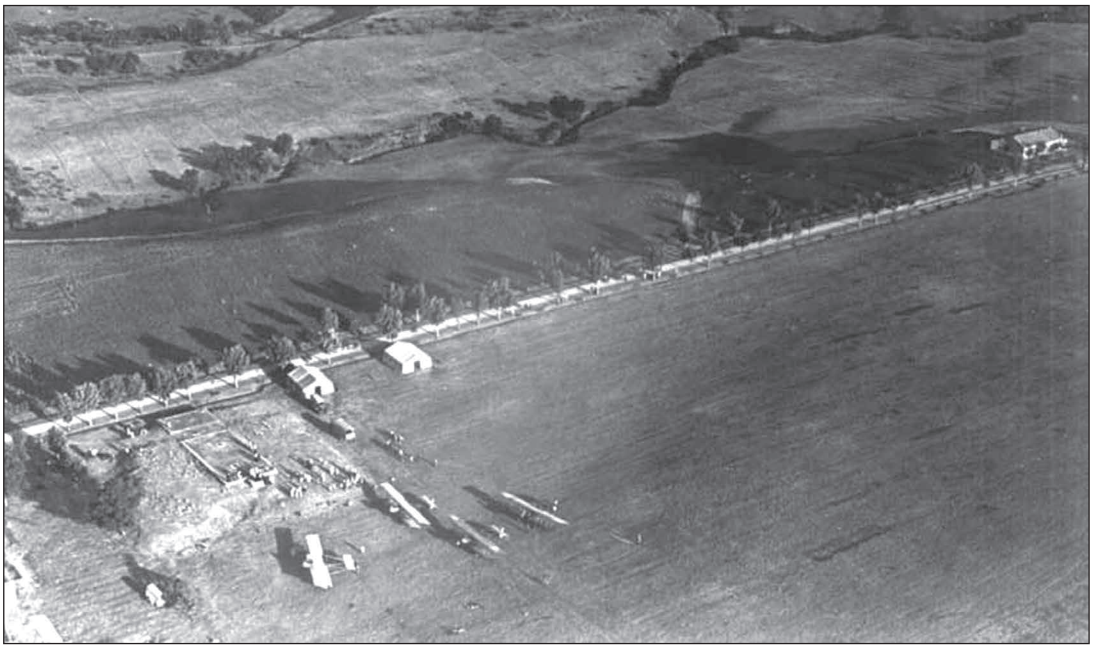
Combat operations in southern Tunisia began in September 1916, by which time French troops closer to the Libyan frontier had already been subject to many enemy raids. Escadrille F 301 was therefore tasked with denying the enemy any hiding place in the desert within a 40km radius around its base. The first flights were to familiarize the crews with the local terrain and also to take large numbers of aerial photographs from which maps could be made. This usually involved flights lasting up to four hours and from 350 to 400 kilometres. The longest such desert flights were actually undertaken by two crews who photographed the Libyan town of Nalut which lay roughly midway between Tripoli and the frontier oasis of



The Farman F 40s or F 41s of Escadrille F 546 (numbered F 306 until May 1917) lined up "somewhere in Algeria" on what appears to be an open day or celebration to which local dignitaries, including indigenous Arab and Berber leaders, have been invited. Six of this Escadrilles's Farmans began a large-scale aerial survey of northern Algeria in July 1917. The crews also made many demonstration flights to impress upon reluctant local inhabitants the advisability of submitting to French military conscription. (Jarrige Archive)



A Farman F 41 of Escadrille 546 which had crashed at Biskra. In fact the unit lost two machines because of the difficult conditions in this part of Algeria earlier in 1917, when it was still numbered as Escadrille F 305. (Alain Gibergues photo, Jarrige Archive)



The aerodrome at al-Buwayrah (Bouira), probably photographed by Escadrille 546 during its aerial survey of northern Algeria. The four assorted aeroplanes on the ground probably included at least two Farman F 41s from this same unit. (Jarrige Archive)

Ghadamis as well as being the powerbase of a local Libyan dissident leader named Khalifa Ibn Askir.

Such missions prepared the way for future bombing missions, but the long flights were not without risk. Although the Farman MF 41 was a sturdy and reliable machine, it was underpowered, slow and had been highly vulnerable in the context of the Western Front. At least six of Escadrille F 301's Maurice Farmans had warlike phrases written in large but somewhat crude Maghribi or North African style Arabic script on the fronts of their nacelles. The six that are known were:

I sow terror in the heart
of the enemy
I spread my wings for the
glory of France
I throw fire
The eagle attracts victory
I scold and I throw bolts
like lightning
My pennant floats victoriously
above the Arabs' head

Perhaps the machines were expected to occasionally operate at such low altitude that these words could be read from the ground, though they were more like to have been for the benefit of any literate locals who came close enough while the aeroplanes were on the ground.

Once the reconnaissance phase was completed, Captain Lafargue decided that Nalut should be bombed on 15 September 1916. Four aeroplanes were therefore prepared. In addition to their machineguns, they also carried high explosive and poison gas bombs. The use of the latter was already considered brutal by the French General Staff, but was still considered necessary to reach people hiding inside the cave dwellings which were a feature of Nalut. Aware of the controversial nature of these weapons, the French authorities

A Donnet-Denaut 150hp flying boat of the Centre d'Aviation Maritime (CAM) at Annaba (Bône) in late 1917, with several aircrew plus their dogs. One of the animals has been dressed in full flying gear. (Méla Archive)

announced their intentions beforehand and gave reasons for their use. Gas bombs would, in fact, be banned by the Geneva Protocol of 1925, but until then remained legal weapons.

The resulting attack is said to have been made from an altitude of 500m above sea level, but as Nalut was itself at an altitude of over 600m, this was presumably a misunderstanding or misreading of the records. The Maurice Farmans came over in two waves, despite quite intensive rifle-fire from the ground. The first wave flew directly from the aerodrome at Tattawin, the second from the French frontier post at al-Dahibah (Dehiba) where they had stopped to be armed and refuelled. Initially the results were considered encouraging, with an enemy ammunition store and the home of the Libyan leader Khalifa Ibn Askir being hit. In fact the crews were preparing for another sortie when they learned of the loss of one of the French aeroplanes flown by Second Lieutenant Chatenay and his observer, Lieutenant Colonel Henri Le Boeuf. The latter had been the leader of the entire operation. Bombing was therefore put on hold while the following day was spent looking for the missing machine and its crew. Valuable reconnaissance was achieved, but the Farman was not found.

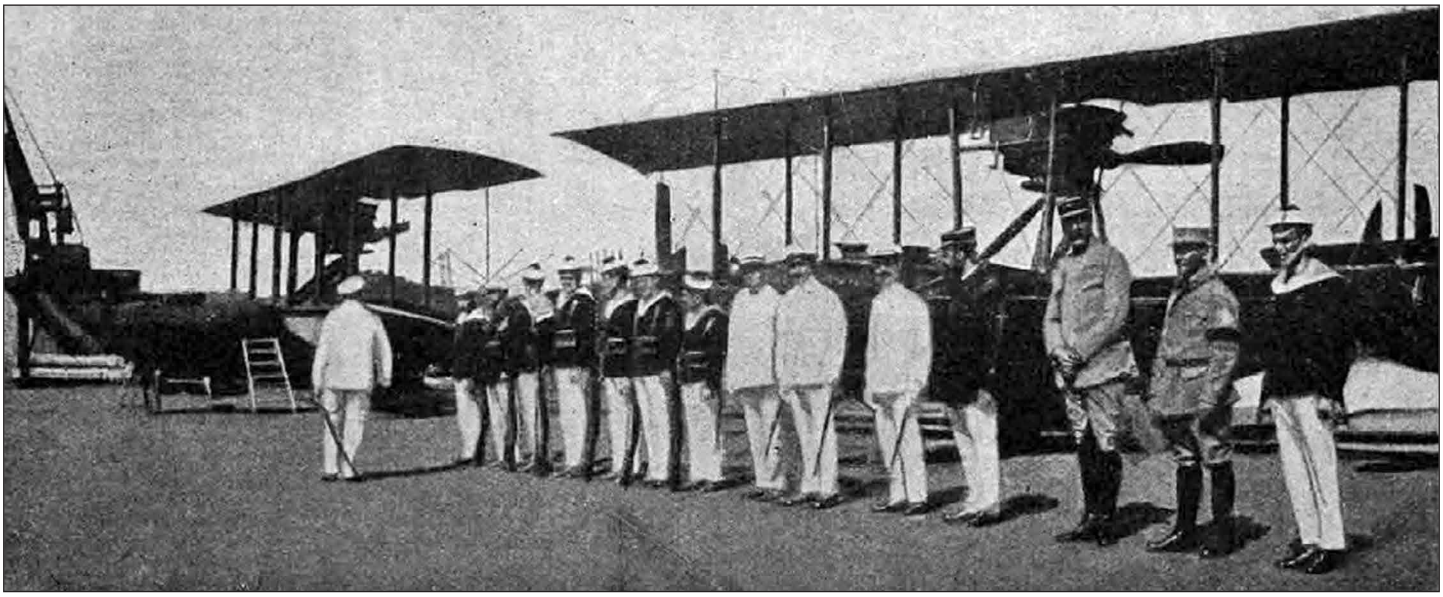
Lieutenant Colonel Le Boeuf was head of the Indigenous Affairs Department in the French colonial government in Tunis and his loss had a significant impact upon morale. Second Lieutenant Chateney had also been one of the most experienced French desert pilots. Search efforts continued into October but it was not until 10 January 1917 that a hunter pursuing gazelles in the Great Eastern Erg, a vast sea of sand stretching across eastern Algeria into Tunisia, came across the Farman. Henri Le Boeuf's body was found later that month and in February Chateney's remains were finally found.

An investigation concluded that no mistakes had been made where normal safety rules were concerned, and the weather had been good. What this tragedy did show, however, was that existing safety regulations designed for flying over Europe were inadequate when it came to flying in true desert regions. As a result the French in southern Tunisia developed a new system of regulations. Areas where it was considered safe to fly were clearly defined and within this zone 15 to 18 Brasier III lorries or tractors, stripped of their heavier bodywork to make them more suitable for driving across the desert and also mounting machineguns, tools, water, food and carrier pigeons, were stationed in various locations. The Brasiers thus became Automotrailleuses and formed TM 1191 Aviation Machine-gun Tractor Section commanded by Lieutenant Louis Audouin-Dubreuil in autumn 1917. This plan was intended to ensure that any airmen who were forced to make an emergency landing in the "safe" desert could always be rescued.

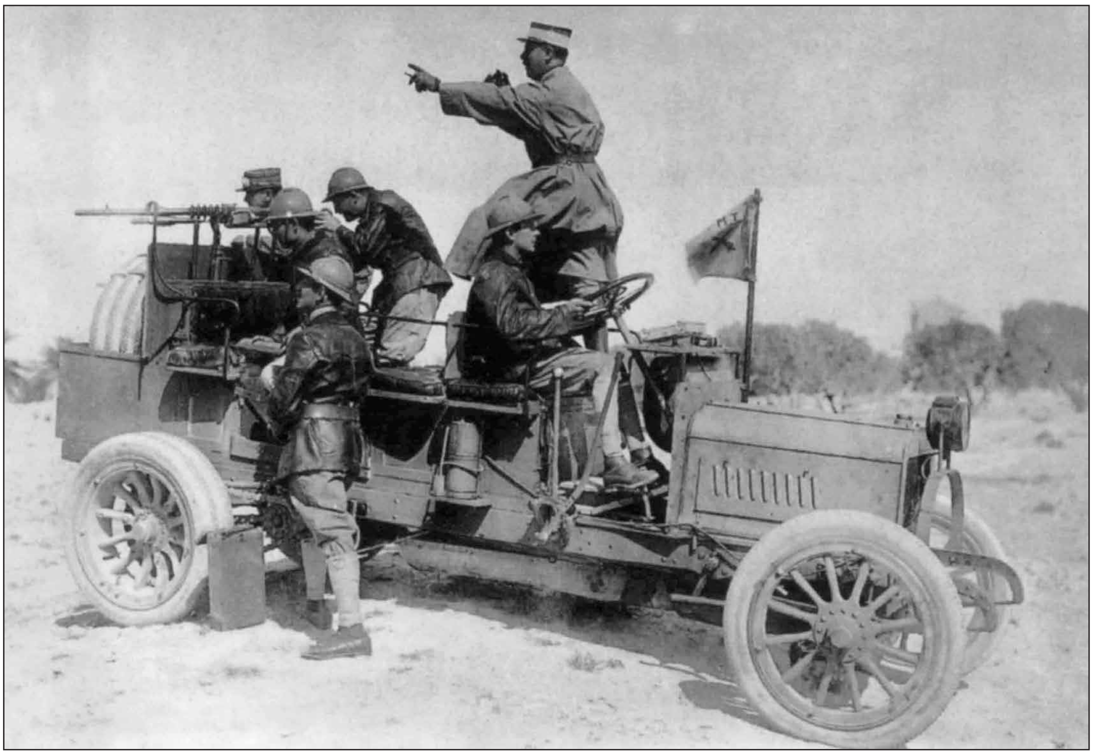
Escadrille F 301 Squadron also experimented with new reconnaissance routes in the border area between Libyan Tripolitania and Tunisia. This was carried out from October to December 1916, sometimes penetrating up to 200kms into nominally Italian Libya. Captain Lafargue also insisted that his aeroplanes flew in groups, never getting more than 500m apart. They were therefore always in sight of each other and could exchange signals by the use of coloured flares or rockets. This was, of course, long before aircrews could communicate with each other by radio. They kept in touch with the armed tractors on the ground by the same means, or by dropping messages, and must always inform a tractor if they intended, or were obliged to, land. One machinegun tractor was assigned to each section of two aeroplanes and served, in effect, as their command post. When the men on the ground wanted to pass a message to those in the air, they did so by laying down lengths of white cloth, normally in a system of numbered bars as a form of telegraphic code.

Early in 1917, F 301 squadron concluded that three air sections, with a total of six aeroplanes, could safely work with just one armed tractor on the ground. This pragmatic solution had features in common with the later British Air Control system established in Iraq in October 1922, though the latter was clearly more advanced. Furthermore, French aviation in North Africa in the last years of the Great War formed a subsidiary part of the Army, whereas the RAF in Iraq was not only an independent military arm but had been given overall responsibility for security in that country.

The biggest problem in Algeria during the years 1915 and 1916 was resistance to military conscription in certain parts of the country. This eventually resulted in violence against isolated civil and military outposts, particularly in the Aures Mountains. After a crackdown, largely carried out by notably loyal Senegalese troops, many Algerian dissidents fled to the eastern Aures where there were large forested areas close to the Tunisian frontier. For this reason the Governor General of Algeria, asked that Escadrille F 301 and its Maurice Farmans be hurriedly deployed to the Aures Mountains at the end of November 1916. However, the situation on the other side of Tunisia, facing the volatile neighbouring Tripolitania, rendered this impossible because transferring F 301 elsewhere would have



One of the photographs which accompanied a newspaper report of medals being awarded to French Naval Aviation flying-boat crews. The latter had attacked enemy submarines off the coast of Algeria during 1917. The ceremony apparently took place at the Centre d'Aviation Maritime at Annaba (Bône), though the crews involved were seemingly based at a number of North African CAMs. (Pierre Jarrige archive)



A clearly posed photograph of a Brasier Tracteur-mitrailleurs "in action" in North Africa. A significant number of Brasier III lorries, stripped of their heavier bodywork to make desert driving easier, and armed with machineguns, plus tools, water, food and carrier pigeons, thus became Automotrailleuses. They formed the TM 1191 Aviation Machine-gun Tractor Section commanded by Lt. Louis Audouin-Dubreuil from the autumn of 1917. (Jarrige archive)

greatly encouraged those seen as Libyan "rebels". Instead, early in December the new French Minister of War, General Roques, decided to send a new squadron of six Maurice Farmans to North Africa. The aircraft were drawn from machines already available in France, and the squadron was commanded by Captain Laurent Charles Lutaud who already knew Algeria well. This became Escadrille F 306, which was formed on 17 December 1916.

For the French, the most important priority in Morocco during these years was to maintain their military position. They also needed to secure the Atlantic coast against possible German attempts to infiltrate agents by sea to stir up further trouble, as was being done in Libya. In such a situation, aeroplanes would continue to play a major role, especially as fighting against dissidents had itself been increasing since May 1915.

There was trouble in a broad arc of mountainous country from north of Fez in the west to the mountains near Taza in the north-east. In many areas French garrisons had been forced onto the defensive, so in March 1916 General Lyautey, the Resident General, was asked to establish two squadrons based in Casablanca and Oudja. This was agreed and the following month Captain La Morlais was put in charge of this revived French aviation presence in Morocco. The primary task of these two escadrilles was reconnaissance and the support of "pacification columns" as they pushed into dissident territory. The first flying unit to be established, Escarille VR 302 had 10 Renault-powered Voisin aeroplanes and was ready at Casablanca on 10 May 1916. It had 10 pilots, 10 observer gunners and three NCO technicians, with 70 troops and other specialists. To give this squadron greater autonomy, it was provided with its own photographic section. In addition No. 304 Aviation Park accompanied the Voisin squadron to Morocco with its own 118 men including three officers, a doctor, eight NCOs, plus 106 troops and specialists. Nor was this all, for the French War Ministry also sent three meteorological sections to provide pilots with the best possible and most up-to-date weather information. Because these support elements only reached Casablanca on 14 June, it was not until 1 July that the Voisins became operational.

A more realistic photograph of three Brasier Tracteur-mitrailleurs on patrol in French North Africa. Working in close cooperation with aeroplanes, they rescued any French airmen who had been obliged to make an emergency landing in the desert or mountains. (Jarrige Archive)

However, the withdrawal of French military aviation from Morocco at the start of the war meant that everything had to be rebuilt in 1916. There was still also widespread scepticism that aeroplanes could make a real difference in this sort of colonial warfare. Fortunately General Lyautey remained a staunch supporter and from late summer 1916 onwards, the airmen rapidly demonstrated their value. Meanwhile the formation of a second squadron for Morocco went ahead in France. Originally intended to be equipped with Peugeot-powered Voisins, it was eventually given Farman MF 41s and the designation F 305. This escadrille reached Casablanca in October and from then on VR 302 and F 305 used what the French Army's Service Aeronautique had already learned so painfully on the Western Front against "hostiles" in the mountains of Morocco. They carried out ordinary reconnaissance, photographic reconnaissance and bombing sorties, despite very difficult terrain and atmospheric conditions which often made flying highly dangerous if not impossible

A new factor had, meanwhile, entered the equation. This was the growing presence of German submarines off the Moroccan coast, which soon resulted in the Voisins of VR 302 carrying out anti-submarine patrols. In the rugged interior of the country, Captain La Morlais personally led the way, finding suitable new landing grounds so that French aeroplanes could operate more closely with the Army's punitive columns. These efforts began to make a real difference early in 1917, especially during operations against the dissident leaders Abd al-Malik and al-Hiba in the Middle Atlas Mountains. Here, for the first time in Morocco, aeroplanes armed with bombs and machineguns were directly able to halt enemy forces, which had been attempting to outflank a French column. This in turn led to requests that the French presence in the air be expanded and strengthened. Indeed General Lyautey seemingly wanted it to become a virtually autonomous military arm, able to project French power across the entire country. This, however, was a strategic vision somewhat ahead of its time.

Captain Le Morlais had shown his worth as a leader and as an air tactician, but a man with broader vision and great skill in logistics now seemed to be needed. So General Lyautey put forward the name of Captain Cheutin who had already shown such organizational skills and had previous experience of service in Morocco. Promoted to a suitably senior rank, though only on a temporary basis, Cheutin took up his command in Casablanca on 15 June 1917. The same month matters were set in motion to considerably increase the power of French aviation in Morocco. The plan was to send a further two squadrons of Farmans, plus some single-seater Nieuport 11s, the famous Nieuport Bébé fighting scouts. In the event, the two existing squadrons received the first reinforcements and were as a consequence re-designated as VR 351 and F 352, while the Aircraft Park was renumbered as No. 406, being upgraded so that it could eventually support six squadrons.

Of course, such developments took time and the new structure was not operational until the end of 1917. By then the available machines were ready to undertake the first military air postal service in August. In May 1917 the French War Ministry decided that all Army escadrilles or squadrons serving outside France should have a distinctive new range of numbers raging from 501 to 600, with numbers 551 to 560 being reserved for units in Morocco, 541 to 545 for those in southern Tunisian and 546 to 550 for those in Algeria. Thus two new squadrons which were currently being organized at Lyons in France, became Escadrilles F 553 and F 554 with 80hp Maurice Farmans. They began operational flying in Morocco during late August. A new Voison squadron, VR 535, was also being established at Lyon and it started flying in Morocco at the start of September. Next to appear was a mixed Escadrille, numbered F 556, which was equipped with Farman MF 41 and Nieuport scouts. Finally, in mid-September 1917 and without waiting for the planned sixth squadron, Comm. Cheutin's five existing operational squadrons set about their duties, training with the five military zones into which France's Moroccan Protectorate had been divided.

There seems to have been further renumbering of some of the squadrons, but a resulting military aviation structure would last well into the inter-war period. From summer 1917, it consisted of VR 551 in Fez though for operational reasons its men and machines were divided between Fez and Taza, plus F 552 at Agadir to monitor the southern Moroccan coast between Casablanca and Tiznit, F 553 Squadron at Meknes, F 554 at Marrakesh, and VR 555 at Taza. The last squadron to be established was F 556 at Rabat and this was under the direct command of the French Resident General. It formed a reserve and was also responsible for patrolling the Atlantic coast between Casablanca and the frontier with the Spanish Protectorate in northern Morocco. This would remain the case until the French Navy's Aeronautique Navale took over coastal patrol duties in February 1918.

The French Navy's Astra-Torres dirigible airship number AT.6 arriving at Baraqi on 17 November 1917, after flying across the Mediterranean from southern France. These airships enabled French naval aviation to extend its anti-submarine patrols much further out into the Mediterranean.(Pierre Jarrige archive)

This was the system which supported French forces in their efforts to quell dissents in the Moroccan highlands during the final 12 months of the Great War. In June 1918 it enabled French troops to open the route from Meknes through the passes between the Middle and High Atlas Mountains. In addition to the usual duties of reconnaissance, a new duty would be added with a decision in January 1918 to deploy four specially modified Dorand AR casualty evacuation aeroplanes. However these did not start work until the autumn of that year.

Protection of the long coastline of French North Africa, and subsequently the sending of long distance patrols out across the neighbouring seas, became increasingly important during the course of the First World War. France already had a number of naval bases on these coasts, of which one of the most important was Bizerta in northern Tunisia. This became the command centre for flying boat operations in April 1916, being responsible for the Mediterranean coasts of both Tunisia and Algeria until the establishment of a subordinate command centre in June 1917. Under Capitaine de Fregate Marcel Favereau it flew both 150hp and 160hp Donnet-Denhaut flying boats. From July 1916 until June 1917 these machines were identified by serial numbers starting with the prefix B.

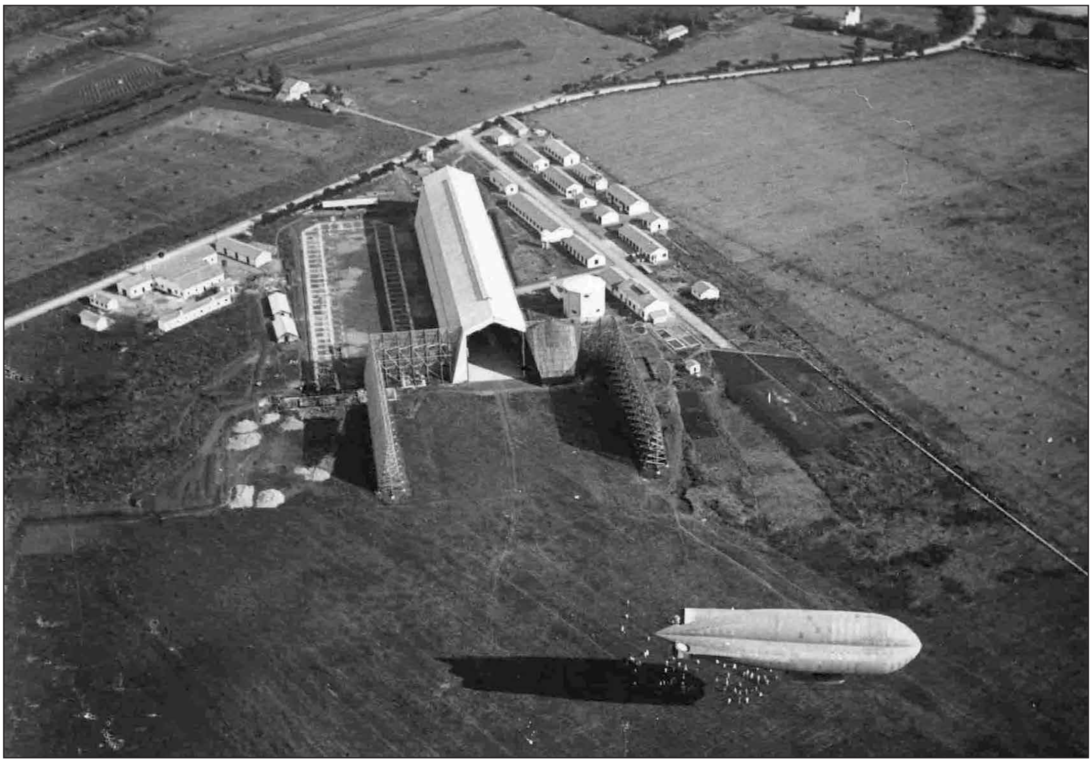
In fact the French Navy had been quicker to send air support to Tunisia than the Army; such a decision having been made on 13 January 1916 and the Donnet-Denhaut flying boats arriving in Bizerta just as the French Navy's Nieuport seaplanes left Port Said in Egypt for their new deployment in Greece. This was because the threat from German and Austro-Hungarian submarines to Allied shipping in the narrow sea between Tunisia and Sicily was considered so serious. The French flying boats also patrolled waters through which such enemy submarines might pass en route to support resistance forces in Libya. Nevertheless, despite the increasing number of such patrols, only one enemy submarine was ever sighted. In contrast it was an escadrille of the French Army's air service, VR 302, which first flew anti-submarine patrols along Morocco's Atlantic coast. Here the first three French Navy 130hp FBAs only arrived in Casablanca aboard the flying boat carrier *Dorade* in March 1917.

In that year matters came to a head in the French Sahara with a serious and widespread revolt by many desert peoples, inspired and to some extent materially supported by the Sanussi in nominally Italian Libya. Anticipating trouble, the French authorities had already set up a special military command for all of Algeria and French West Africa on 12 January 1917. The French now faced a loose confederation of Sanussi, Tripolitanian nationalists, dissident Berber, Tibu and Tuareg tribes. Some elements of this impressive array had received a small amount of Ottoman military aid via German submarines but many other so-called dissidents were remarkably poorly armed. This was especially true of the Tibu warriors of the Tibesti Mountains in the centre of the Sahara Desert who were described as dressed in skins and lacking firearms.

By now, however, the effectiveness of the French flying units was no longer in doubt and in January 1917 the government agreed to the deployment of two further squadrons in Tunisia. Such increased strength would hopefully enable French forces to close the still porous frontier with Libya. Under a new plan Escadrille F 301 would remain at Tattawin while a second squadron would be deployed in the Bin Qardan (Ben Guerdane) region to cover the frontier between Salah and the coast. Finally, a proposed third squadron equipped with faster aeroplanes would remain in the aviation park at Qabis (Gabes), undertaking local reconnaissance while standing ready to support the other squadrons if needed.

In anticipation of the forthcoming crisis, the Military General Headquarters in France had recruited senior personnel for the proposed second squadron as early as December. Originally it was intended to equip this unit with twin-engined Caudron G.4s withdrawn from the Western Front, it was also to have an additional single-seater Nieuport flight, but in the end Farman MF 41s were chosen. Hence the squadron's eventual number, F 308, and it seems to have been operational at Jarjis (Zarziz), on the Tunisian coast close to the Libyan frontier, by the end of April. The French in North Africa would, in fact, benefit from the availability of substantial number of aeroplanes such as the Maurice Farman MF 40, the Caudron G.4 and G.6 which had been outclassed on the Western Front by early 1917.

Meanwhile in Tunisia, Farman-equipped F 301 under Captain Lafargue formed part of a hurriedly assembled force of aeroplanes and armed tractors which was sent to deliver munitions to the small and threatened outposts on the coast. This they were able to do much more quickly than a normal relief force of infantry and cavalry. Such a tactic had been proposed by Lafargue the previous year and it now proved very effective. During the following spring of 1917, Italian forces pushed back the insurgents around Tripoli and the French decided that a third squadron was no longer necessary on their side of the frontier. Instead the activity of German submarines in the Gulf of Qabis (Gabes) and near the island of Jirbah (Jerba) caused greater concern, so the primary duties of the proposed Escadrille C 310 changed. It would now be split into two sections, each eventually intended to become squadrons in their own right to patrol the coast and waters of the Gulf of Gabes. In the event these two new squadrons, C 543 and C 544, were established in June 1917 and were based at Mahdia and Sfax. For their part, squadrons F 541 (ex-F 301) and F 542 (ex-F 308) continued to patrol the Libyan border, supported by their own armed tractor sections.



The air station at Baraqi with a French Astra-Torres airship outside its hanger. The framework avants ports or walls extending forward on either side of the hanger entrance protected an airship from side-winds while it was being manoeuvred in or out of the hanger. (Jarrige Archive)

Another significant development in 1918 was the arrival of motorized radio sections, each with an effective range of 120km. During this same period flying was made safer by the provision of many more emergency landing grounds along their normal patrol routes, mostly around 40km apart. The most important such secondary aerodromes also had early forms of protected pens for the aeroplanes. Each of these had three walls, three metres high, plus supplies of fuel, munitions and some of the basic tools required for aircraft maintenance. Being located in occasionally remote and exposed positions, these airfields could each serve as advanced landing grounds for two aeroplanes. As such they boosted the morale of isolated and lonely French outposts. Meanwhile French airmen carried out a number of raids against targets in Libya early in 1918 but here enemy activity declined markedly and virtually ended by summer.

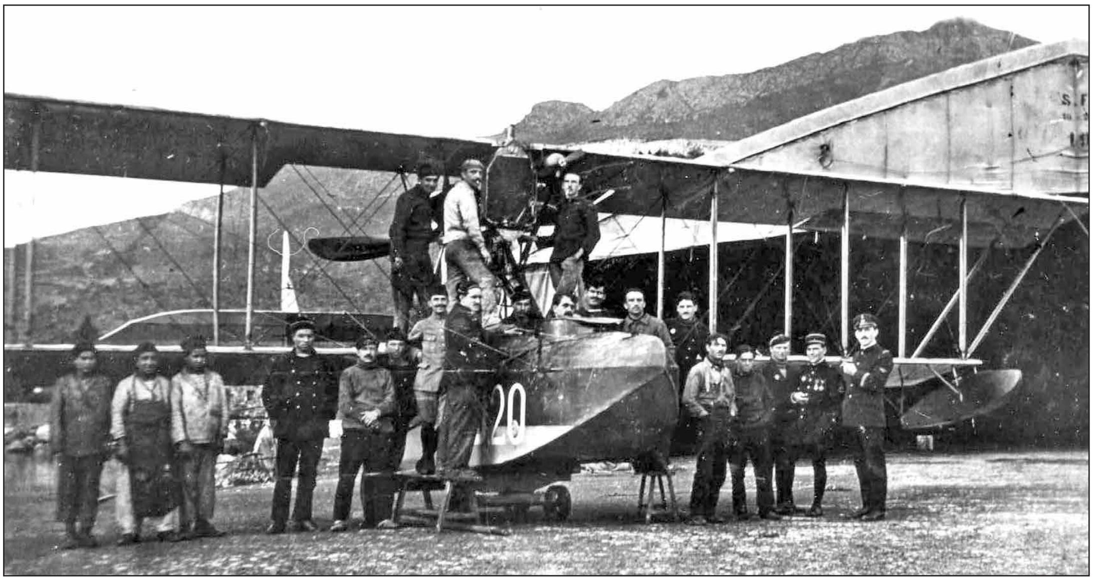
Further to the west the years 1917-18 saw a real but little known colonial war fought in French Algeria. Even in late 1916, the situation in the Aures Mountains was so serious that troops were diverted from southern Tunisia to the province of Constantine. At the same time, however, the appalling attritional warfare on the Western Front meant that large numbers of men were being taken from French North Africa to hold back the Germans. This was theoretically possible because the newly formed French flying units were supposed to take on more of the burden of containing Berber and Arab "rebels". In the event, an emphasis on aeroplanes and motorized troops proved successful, and involved fewer men at a time when French manpower resources were becoming dangerously stretched.

From November 1916, Escadrille F 306 had helped French Naval flying boats patrol the coast of Algeria. The unit was then based at Ain M'Lila south of Constantine to operate against insurgents in the Aures Mountains. In late January 1917 Captain Lawrence decided to move this squadron to the pre-war base at Biskra, south of the Algerian coastal mountains, which had last been used in 1913. Two new hangers were built and the first four Farman MF 41s arrived on the last day of the month, followed the remaining two aeroplanes four days later, making a total of six. However, the difficult conditions soon reduced the number of operational machines to four.

Initially their aircrews flew reconnaissance and psychological warfare missions, dropping bombs near the villages or camps of potential "rebels", as well as leaflets on actual populated centres. This was described as "showing the (French) roundels" to convince active rebels that there was nowhere to hide. By March such sorties by F 306 had restored the situation, from the French point of view. Some people nevertheless criticised General Deshayes de Bonneval, commander of French forces in the south Constantine province, of being timid because he showed such restraint and also only allowing his airmen to fly in good weather. Nevertheless, de Bonneval's strategy worked and also highlighted the effectiveness of air power in such situations. The military objective had been achieved while the risk that a failure or loss of an aeroplane could undermine French prestige had been avoided. This approach was, in fact, praised by the explorer Leon Souguenet, who knew the area and its people well. In a letter to Charles Lutaud, the Governor General of Algeria in February 1917, Souguenet described the psychological impact as "amazing" because the indigenous inhabitants of the Aures Mountains now realised that aeroplanes were something against which they could do nothing. Such technological arrogance would sadly grow stronger and would sow the seeds of many future problems.

For the present, however, the success of the old pusher biplanes of Escadrille F 306 merely led to a suggestion from General Moinier, commander of French troops throughout North Africa, that this squadron be given an economic role as well as its current military one. The idea that aeroplanes based at Biskra could support the opening up and indeed conquest the Sahara was not, of course, a new one. Meanwhile, a potential crisis in the Aures Mountains may have been avoided, but since the murder of the French Catholic missionary Father Charles de Foucauld at Tamanrasset on 1 December 1916, the people of the Hoggar Mountains in the deep desert of southern Algeria had been on the verge of revolt. In fact it looked as if the French might lose control of this part of the Sahara altogether. So, in January 1917, the Minister for War decided that the only solution was to place the vast and currently separately administered desert territories of Algeria, Tunisia and French West Africa under a single command with General Francois-Henry Laperrine at its head.

Laperrine had not only been a friend of Charles de Foucauld but was an expert in many aspects of the Sahara, having organized the Compagnies Méharistes Sahariennes or French Camel Corps before the Great War. General Francois-Henry Laperrine was also



The French Poste de Combat (PC) at Bijayah (Bougie) was squeezed between the beach and the steep hills inland; a not uncommon situation for French naval airmen around the Mediterranean. On 10 December 1918, a month after the Great War ended, this unit's personnel were photographed with a Donnet-Denhaut 200hp flying boat, individual code number D.20. On the far right is Enseigne de Vaisseau de 1ère Classe Holtzammer, the station commander. On the far left are three Indo-Chinese labourers, recruited because they were believed to be more loyal than the local Algerians. (Marin-Dubuard Archive)

Gen. Nivelle visiting one of the French aerodromes in Tunisia, where he was inspecting Farman F 40s or F 41s and Brasier Tracteur-mitrailleurs. This was probably during his tour of inspection of the Saharan outposts in spring 1918. The markings on the nacelle of the Farman suggest that it may have been from Escadrille F 542 (ex-F 308). (Jarrige Archive)

a realist, saying, as he lay dying following an aeroplane crash in the Sahara in 1920; "People think they know the desert... People think I know it. Nobody really knows it. I have crossed the Sahara ten times and I will stay here". He did indeed stay there, being buried next to his friend Father Charles de Foucould at al-Qul'ah (El Golea, also known as El Menia). In 1917, however, General Laperrine was an advocate of the use of modern technology to pacify the desert, especially aeroplanes. Supported by Governor Lutaud, he got Escadrille F 306 to resume the opening up of Saharan skies, which had been abandoned in 1913. The first major flight was on 3 March 1917, when three Farman MF 41s led by Capt, Laurent flew via Touggourt to reconnoitre the numerous oases which dot this region. Other flights followed in March, some over the extensive area of shifting sand called the Great Eastern Erg, while bombing training was designed to impress and indeed to intimidate the local "natives".

The strength of F 306 was increased to 10 aeroplanes and the squadron benefitted from the establishment of a Divisional Aviation Park to guarantee its supplies. Nevertheless the aeroplanes still followed known roads or tracks, as they had done before the war, because it was considered too dangerous to venture into unknown territory with existing machines. Captain Laurent also considered that his pilots and observers lacked sufficient experience to go any further. Nevertheless, his squadron was proving the viability of flying operations over the real desert and in April 1917 they reached Ghardaia and thus linked this deep desert outpost with Biskra, al-Qarara (Guerara) and Touggourt. Thereafter their focus shifted back northwards, using training sorties to keep watch on the nomads of the Bou Saada region.

Having been renumbered as F 546 in May 1917, the squadron sent six of its machines to continue the aerial surveying of northern Algeria as far as the Moroccan frontier during June to September. Based at Tlemcen in July, these aircrews made numerous "demonstration flights" to impress upon reluctant local inhabitants the advisability of submitting to French military conscription. This would be repeated in other parts of the country but further ambitions in the deep desert to the south were not yet authorized. There was, after all, a war on in France itself and anyway the deaths of Lieutenant Colonel Le Boeuf and his pilot in neighbouring Tunisia caused the authorities to fear the political impact of any such losses in Algeria.

Nothing daunted, in July 1917 General Laperrine asked that another squadron be sent to Algeria. In August the French government seemed to agree, but in reality only permitted the deployment of Escadrille C 547 in northern Algeria, not in the desert south. C 547 was equipped with six Caudron G.4s and six Sopwith B.1s (French-built, 130hp Clerget powered single-seater bomber versions of the Sopwith 1 ½ Strutter single-seater bombers). C 547 was initially intended to support F 546 because even northern Algeria was too big an area for one squadron to cover, but in the event C 547 became the first escadrille to be assigned specifically to the Sahara. This allocation was approved on 15 October 1917, with C 547 being under the command of Lieutenant Alexandre Bernard.

At last Algeria had two squadrons, each with clearly defined responsibilities; F 546 in the north and C 547 in the south. It was the latter which faced the most urgent peace-keeping challenges

The gondola of a French Navy dirigible airship on patrol over the Mediterranean. Astra-Torres airships numbered AT.5 to AT.9, and comparable Zodiac ZD.1 to ZD.5 airships, had increased gas capacity, which enabled them to carry 250kgs of bombs. Yet they remained so slow that enemy submarines often submerged before the airships could drop their bombs, as a result experiments were made with mounting a 47mm gun onboard, with significant success. (Pierre Jarrige archive)

and in Autumn 1917 it was officially recognized as the "Sahara Squadron". There was still widespread scepticism in some quarters, both political and military, but General Laperrine was determined to carry out a proper military reconnaissance of the rugged Hoggar Mountains in southern Algeria. These lay at the very heart of the Sahara Desert. So Escadrille C 547 would be sent to the oasis town of Ain Salah in the centre of Algeria, north of the Hoggar. However, this lay over 900km from Aviation Park No. 405. Therefore C 547 would not be easy to supply even though, from September, F 546 was based at Biskra and could have served as an intermediary station. As a step towards Ain Salah, it was decided that C 547 should be based at Warqlah (Ouargla), about halfway to Ain Salah, from late November.

Unfortunately, the twin-engined Caudron G.4 was not proving suitable for its new environment. It was neither versatile, nor did it have enough range, while its rotary engine proved almost unusable in sandy desert conditions. Not until the following month was escadrille C 547 considered operational. From then on, the air and ground crews steadily became more used to the new conditions in which they had to work. For his part, Laperrine was disappointed but realistic. In December he wrote; "It is likely that for a long time aircraft will have to return to their starting points along precisely the same routes as they flew out … (only being able to cover 450km) ... This is all that can be expected of them at the moment." Laperrine also still had to argue vigorously in defence of the aeroplanes because Lieutenant Colonel Chardenet, chief of "native affairs" in Algiers, continued to regard them as expensive and not particularly useful.

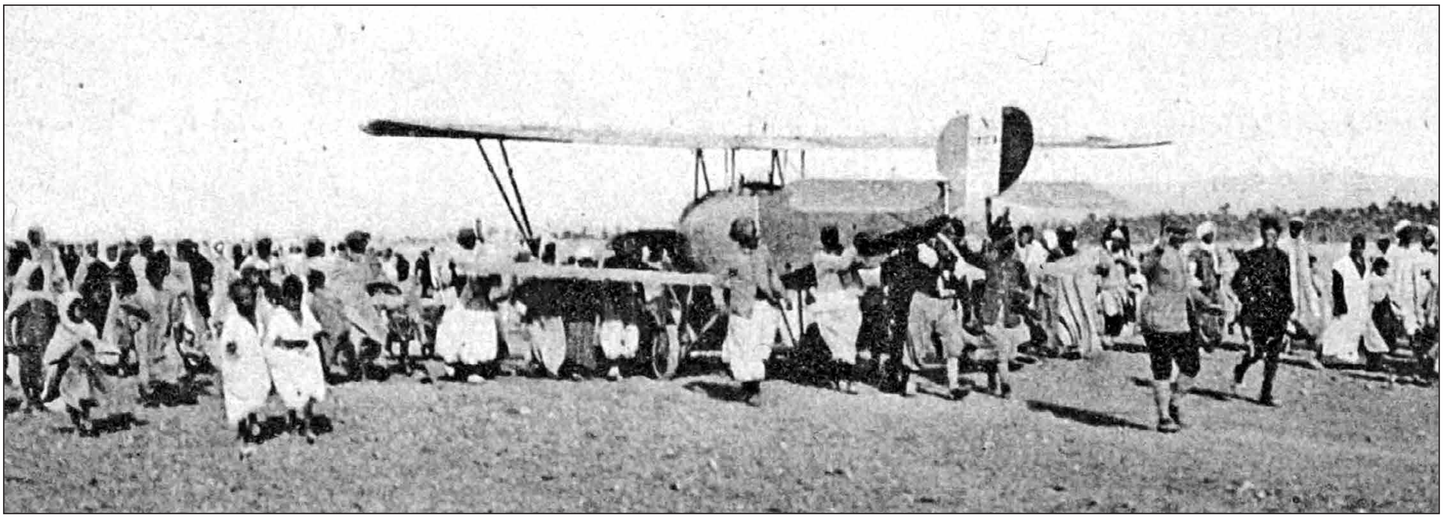
Meanwhile escadrille F 546, based at Biskra, carried out some effective military support missions. From the end of November C 547, despite not yet being at full operational strength, was able to cooperate closely with F 546 at Biskra. The difficulties of C 547 were highlighted in a letter which Lieutenant Bernard wrote on 9 December 1917 at Biskra, to his friend and former instructor Captain Garcin at Châteauroux in France.

> Mon Capitaine,
>
> I returned from Ain-Salah where I had gone to prepare the installation of my squadron 1,200 kilometres from Biskra. I made the trip by car, it is difficult and I wonder how we will do it with aeroplanes which will have no opportunity to refuel. The personnel of my squadron have arrived, and no pilot has not passed at Chateauroux [training base]. I am not trying to flatter the place, but it shows: of four aeroplanes, I already have three hors de combat [out of service] and two pilots in hospital. Things started well, then landing at speed, overturned.
>
> I first flew the [Caudron] G4 before my departure to Ain-Salah when I flew solo. I have now made more than 150 landings. The organization of the squadron is progressing little by little, but there is work still to do: The Caudron does not seem suitable for this country; the sand that gets everywhere plays bad tricks on us. The workers who are here with us are doing great service without the slightest accident. I flew more than 5,000kms in October without the slightest accident. It is a wonderful machine. At Escadrille 546 we have Warrant Officer Auvit who was a former pilot at Chartres in May 1915.
>
> I enclose some photos of our flights in north Africa. As soon as those of Ain-Salah are ready, I will send copies to you; look at them, my Captain, as a mark of my deep gratitude and respectful sympathy.
>
> Please give to Madame Garcin my best respects and for you, My Captain, the assurance of my grateful feelings.

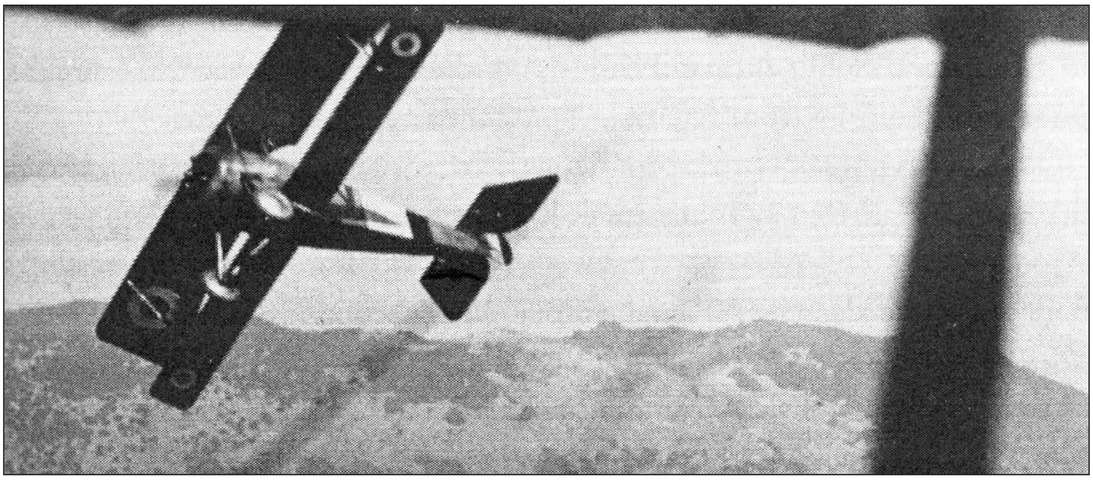
Thus, from 11 to 15 December, seven Farmans of F 546 and a Caudron of C 547 planned to make a thorough reconnaissance of Warqlah (Ouargla). In the event this was not carried out until the 29th to 31st of the month, when the flight was led by Lieutenant Bernard, the CO of C 547. The crews searched out potential landing areas in the designated area and explored another area to the southwest. This was quite a remarkable flight, given the archaic performance of their Maurice Farmans.

Meanwhile, General Mourier decided that some aeroplanes must be stationed at Warqlah as soon as possible. So two Farmans were "borrowed" from F 546, soon to be followed by a third, while the aircrews were given additional desert training before going to Warqlah on 23 February 1918. Finally, on 18 March, the first two Caudron G.4s of C 547 flew to join the Farmans already there. Only one arrived because the second had to make an emergency landing on the desert track between Touggourt and Warqlah. It was a start for the "Sahara Squadron", though this unit had a long way to go before it became the autonomous unit which had originally been intended.

Meanwhile an exploratory flight over the Ain Salah area was planned in order to determine whether the original concept was feasible. It was while this expedition was being organized that



A Nieuport XI scout, commonly known as the Nieuport Bébé. It was part of Escadrille F 556 at Bishar (Colomb-Bechar) in Algeria, close to the Moroccan frontier, in spring 1918. Established in late summer 1917 and initially based at Rabat, Escadrille F 556 was under the direct command of the French Resident General in Morocco. (Jarrige Archive)



Another photograph of one of Escadrille F 556's Nieuport XI Bébé single-seaters, taken from another aeroplane over the Atlas Mountains in 1918. (Pastor Archive)

Lieutenant Fondet and his motorized detachment were ambushed and massacred at Ain Guettara, on 1 February 1918. They had been studying the proposed route to be followed by the aeroplanes, far away from the normal caravan routes, but were attacked by Tuareg tribesmen on the Tademaït plateau, north of Ain Salah. This tragic event would cast further doubt upon the whole French project of Saharan aviation, with General Foch, the future Commander in Chief of Allied Armies, openly asking whether it was worthwhile at a time when the Great War still raged.

A more immediate result of the incident was an order that pilots must never deviate from routes which were known, were safe, and where any aeroplane which force landed could be quickly located. At a stroke, offensive operations by air became impossible, though C 547's slow and careful penetration of the desert did continue. On 14 March 1918 three Farmans of F 546 set off from Warqlah to Ain Salah; a flight of around 600km. It was completed successfully, with stops at Berkane and Ain Guettara and in favourable weather. Unfortunately the return flight was more difficult. The machines took off on 25 March, finally getting back to Warqlah on the 27th after avoiding dangerous sandstorms and meeting serious air turbulence. Furthermore the machines were short of fuel because some of the supplies previously sent to Ain Salah had evaporated in the heat of the desert. Nevertheless, all things considered, General Laperrine considered the venture to have been a success.

In his own report, however, Captain Laurent seems to have been more cautious, pointing out that airmen would only be able to play a significant military role once they had a complete knowledge of the desert region where they were expected to operate. Without this, fear of getting lost and having to make an emergency landing would dominate their thoughts. In Laurent's opinion, it came down to whether an airman regarded the Sahara as his friend or his enemy. Drawing upon earlier French experience in Tunisia, Captain Laurent also urged that motorised vehicles and aeroplanes work together. Both should be under a single, experienced commander and consequently the Saharan flying squadrons should have their own such vehicles. Until aeroplanes had enough range and sufficiently reliable engines, airmen could not operate entirely autonomously in these desert conditions.

Laurent also maintained that, until sufficient man-made guidance markers could be set up across the desert, local indigenous guides needed be recruited to serve in a way comparable to "native pilots" aboard ships in unfamiliar waters. This system was, in fact, suggested in April 1918 but there was no short-term solution to the problem of communication between "indigenous observers" who could not speak French, and pilots who could not understand Arabic, still less one of the Berber dialects. Laperrine favoured such an idea, though some other French officers including Lieutenant Bernard remained thoroughly opposed to "Saharan natives" being recruited as observers. Bernard fearing that what he described as a "childish" idea would undermine the prestige of Europeans by allowing indigenous people to fly. Not only did he not trust the local population, he feared that a local guide might try to murder a pilot in the air, so this imaginative concept did not get off the ground.

Following the disastrous so-called Nivelle Offensive on the Western Front (16 April to 9 May 1917), General Robert Nivelle was replaced as Commander-in-Chief in France. Instead he was appointed as C-in-C of French forces in North Africa from

December 1917. Despite the devastating blow to his reputation on the Western Front, General Nivelle continued to be a vigorous and forward thinking officer, fully aware of the possibilities offered by aviation. During a tour of inspection of the Saharan outposts in spring 1918, he was taken up on a number of flights by Escadrille C 547 between 21-24 April, to learn about reconnaissance in a desert theatre of operations. This was despite the fact that weather conditions and a shortage of fuel meant that C 547's Caudrons had only made a few sorties since 1917. In fact Escadrille C 547's position had also not been made any easier by the difficulty of supplying its distant aerodrome, or by a continuing lack of cooperation on the part of some elements of the French bureaucracy in Algeria.

Therefore, General Nivelle asked Captain Laurent to review the whole deployment of French flying units in Algeria. In May Laurent proposed a redistribution of his forces. One flight of F 546 should remain in Biskra with four aeroplanes while two other units, initially with three machines each, would be stationed at Algiers and Oran. F 546's strength should also be increased to twelve aeroplanes – four in each location. Their role would be partly political, to maintain French prestige and intimidate dissidents, partly to maintain up-to-date reconnaissance of their respective areas. As part of this programme it was planned to provide Escadrille F 546 with two cinematographic cameras, plus necessary support equipment.

Meanwhile, C 547 would continue to be based at Warqlah, with six aeroplanes and its own small repair workshop. Eventually this escadrille should also maintain a flight at Ain Salah or somewhere else in the deep south. Captain Laurent also put forward the idea that, to make C 547 truly effective, it should be re-equipped with 10 aeroplanes having stationary Renault or Hispano-Suiza engines, rather than its existing Caudrons with their unsuitable rotary engines. Ideally, such new aeroplanes needed a cruising speed of 120 to 150kph and an endurance of four to six hours in the air. Meanwhile General Nivelle suggested that the Saharan Squadron also be equipped with armed tractors, like those which had proved so effective in Tunisia.

During the spring of 1918 a new and unexpected threat emerged in the unlikely form of a feared attack by German airships against Allied naval bases in Naples and Port Said. As a result, on 15 April General Nivelle suddenly asked that the Mediterranean coast of French North Africa be protected by single-seater Sopwiths. In fact nothing came of this. Instead, the French Aviation Park No. 405 at Biskra was moved close to the city of Algiers on the coast while Escadrille F 546 continued to operate from Biskra until May, leaving C 547 to take over all the entire aerodrome later that month. There were other moves by various units during the summer and early autumn of 1918, and C 547 at last began to re-equip with Renault powered Voisin 10 aeroplanes during August. The squadron would eventually have fourteen of these steel-framed machines, specially chosen for their suitability in colonial conditions and would consequently be re-designated as VR 547, though this only seems to have taken place after the Great War ended. The separated flights at Oran and Constantine would similarly be given Voisins; thus becoming Escadrilles VR 548 and VR 549 respectively.

At the end of the summer of 1918 the Sahara squadron received an armed tractor section, including two radio vehicles which greatly increased their effectiveness in the deep desert. This final wartime re-organization of French air units in Algeria would survive little changed for many years and was now under the overall authority of an officer called the Commander of Algerian Military Aviation. He was soon to be Captain Laurent.

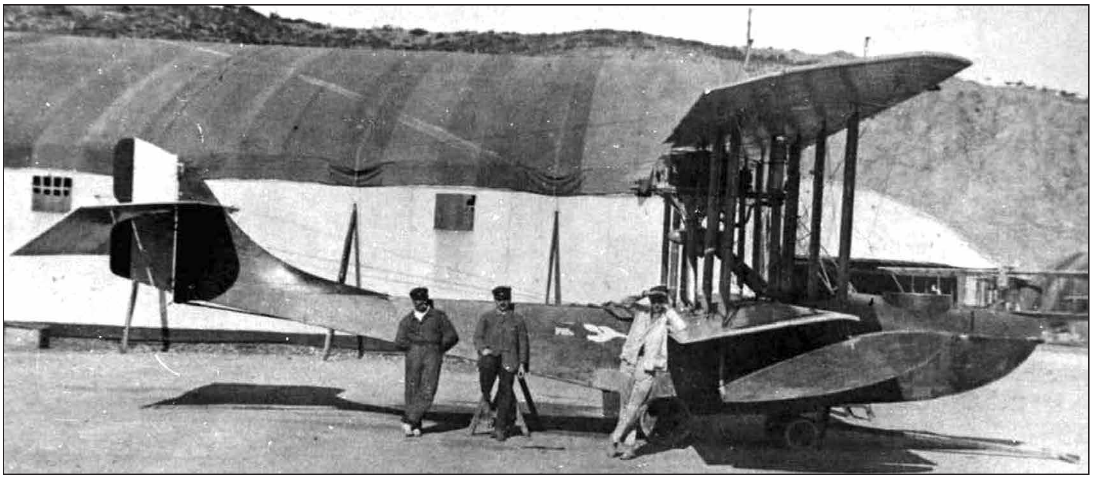
In the French Protectorate of Morocco, those in command of aviation during the years 1917-1918 always had to keep in mind what was happening in the Spanish Protectorate in northern Morocco. So far, French aerial activity had mirrored that of forces on the ground by being clearly divided into regions within a country that was itself divided by high mountains. This division was even more pronounced in winter when snow blocked the passes and rain made many other routes impassable. Furthermore, the semi-nomadic or transhumant tribes and the herds of cattle spent the summer in the uplands and the winter in the lowlands.

On the other hand, some dissident groups found safety in the highland regions even during winter, and took advantage of the spring and autumn migrations to attack isolated French military outposts. The task of aircrews was sometimes to find those who had made such attacks. The French airmen also provided support to threatened outposts and bombed insurgent bands when necessary. As a result spring and summer, the times of migration or transhumance tended to be busy for the escadrilles. Other aeroplanes meanwhile flew in support of mobile French columns, providing photographic reconnaissance of the route ahead and occasionally giving direct support by bombing insurgent groups. They even introduced a technique brought to near perfection on the Western Front, directing French artillery by radio from the air.

In southern Morocco one of the biggest military problems lay in the fact that some areas lay on the far side of the High Atlas Mountains which could be virtually cut off from the main French military centres. Similarly Marrakesh, while not lying beyond mountains, was far to the south of the other main urban centres. If the French could deploy military aviation units in such areas, this might solve some of their problems, enabling them to respond quickly to insurgent activity without having to tie down large numbers of troops just in case something might happen.

By the summer of 1918, the French squadrons in Morocco had received no new aeroplanes since their initial deployment to North Africa. This was despite the fact that the usual operational life of machines on the Western Front had been six months. Furthermore, their aeroplanes had not been new in the first place. Not surprisingly those in Morocco were now showing increasingly serious signs of wear and tear, despite the heroic efforts of mechanics at Aircraft Park No. 406. There were, in fact, times when some units were virtually grounded. Furthermore, the old Voisin 10s could not fly in particularly hot conditions and were in urgent need of replacement. This would eventually come in the form of Voisins with 190hp Renault 8gd engines developed specifically for colonial use, largely on the basis of French experience of using Voisins in Morocco since 1916. Perhaps surprisingly, Comm. Cheutin reported that his men were reluctant to accept these new machines, stating that; "for reconnaissance, observations and taking photographs in Morocco's mountainous regions, nothing beats our old Farman".

French difficulties in Morocco were exacerbated in spring 1918 when troops had to be rushed from North Africa to face the German offensive of 21 March on the Western Front. Unfortunately the French in Morocco also faced an increase in insurgent activities around the same time. This came from the persistent "rebel" Abd al-Malik in Taza Province, from a Berber leader named Hamou in the Atlas Mountains and from al-Hiba in the south. There was also an unexpected rising by the Berber Ait Atta tribal confederation in Tafilalt on the edge of the Sahara. The only advantages that the outnumbered French forces had, was their speed of movement and technological superiority – most notably their use of aeroplanes.



A Donnet-Denhaut 150hp flying boat of the French Centre d'Aviation Maritime (CAM) at Arzyu (Arzew) on the Algerian coast. This CAM had a relatively brief history, being set up in April 1918 and closed down the following December. The code number of this machine is unknown, but its fuselage has been decorated with a white painted seabird. Such individual markings were extremely rare in the French Aviation Maritime during the First World War. (Pelletier Doisy Archive)

As had been predicted by General Lyautey back in 1916, air power proved decisive. This was highlighted in a report written on 21 March 1918, describing how French aircrews had found an enemy encampment of 150 tents beyond the river Umm al-Rabia at Beni Mellal, in the mountains south-east of Casablanca. This encampment was then bombed, after which one of the younger sons of the rebel leader presented himself at the nearby French military outpost at Khenifra, refusing to fight for his father anymore.

The moral impact of – or more correctly the terror inspired by – French aeroplanes was reported in other areas, often tipping the balance in favour of outnumbered and isolated French positions. Escadrille F 552 at Bou Denib in the Tafilalt area, beyond the mountains and close to the desert border with French Algeria, proved especially effective. Two other units were a section drawn from VR 555, which was based at Oujda in eastern Morocco, and a section drawn from F 556, which was based in Tadla province north of the High Atlas and west of the Middle Atlas Mountains. The latter unit also had to support French forces at Tafilalt. It was during this crisis that, on 2 May 1918, the first direct flight was made over the mountains from Meknes to Bou Denib by three Voisons of Escadrille VR 551. A short while later the Nieuport Flight of F 556 did the journey in the opposite direction. Comm. Cheutin personally took part in these flights which, for the first time, linked the coastal plain and the Saharan oases of Morocco by air.

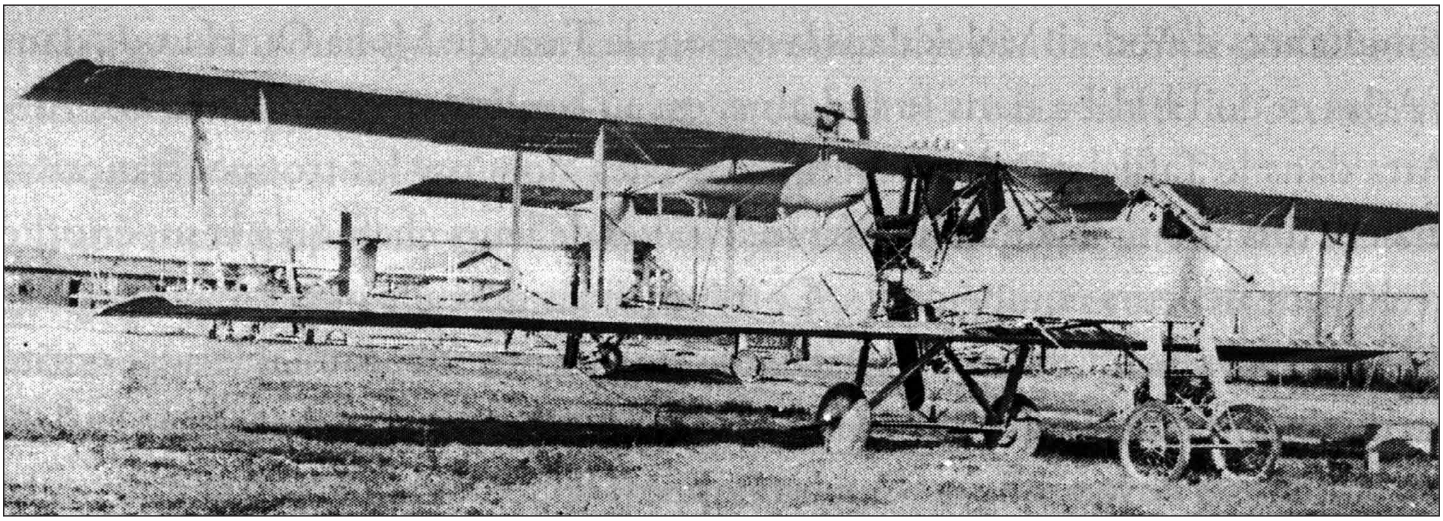
Insurgencies may have been contained for the moment, but General Lyautey was still acutely short of troops and so, during the summer of 1918, he demanded three more flying squadrons. At the start of October, despite the Great War still raging in Europe, the flying sections at Oujda and Tadla were raised to the status of separate Escadrilles, being numbered VR 557 and F 558 respectively. A third squadron, number 559 was created though only "on paper" for the moment. It would take several weeks before the units at Oujda and Tadla received their own aeroplanes or could operate independently. In fact this did not happen until December 1918, by which time the Great War had at last come to an end.

The years 1917-18 had seen increasing patrols being flown over both the Mediterranean and Atlantic by the French Naval Air Service in North Africa. Bizerte in Tunisia remained the command centre for flying boat operations until subordinate centres were established at Algiers, Oran and Sousse in June, and at Bone in September 1917. Its responsibilities covered the coast of Tunisia and Algeria, being led by Capitaine de Fregate Favereau until July 1917 when Capitaine de Fregate Gerspach took over, followed by Capitaine de Fregate Degrenand from October 1917. These anti-submarine patrols became so important that the Mediterranean coast was split into three sub-divisions in November 1917. Bizerta still dealt with the Tunisian coast under the command of Capitaine de Corvette De Humbert who was succeeded by Capitaine de Corvette Fenouil in April 1918 and then Capitaine de Corvette Ancelin in August 1918. Their command included the French naval air station at Sousse and, from January 1918, a new Centre d'Aviation Maritime at Marsala on Italian territory in Sicily. From July 1917 to November 1918, the French command also had a smaller outpost on the Italian island of Lampedusa.

Meanwhile the central and eastern sectors of the Algerian coast were the responsibility of Capitaine de Corvette Fenouil in Algiers. He would be succeeded by Capitaine de Corvette De Humbert in April; these officers having the subordinate stations at Bone and, from October 1918, also Jijil (Djidjelli) under their authority.

The western sector of the Algerian coast was based at Oran under Lieutenant de Vaisseau De Poyen who initially only had this station under his command. A Centre d'Aviation Maritime was set up at Arzyu (Arzew) east of Oran in April 1918 but was rated only as a "combat post" under the authority of Oran. This entire structure of French flying boat bases formed part of the Mediterranean Coastal Defence Command. Once a convoy system had been put in place in June 1917, its primary purpose was to escort such convoys, especially those sailing between North Africa and southern France, acting in close coordination with the French Naval Command in Toulon. A smaller number of maritime reconnaissance patrols were also flown.

This was monotonous work, though not without dangers, given the limited capabilities of the naval aircraft currently available. Their first combat action came on 9 August 1917, when two Tellier 200 flying boats from Tunisia (numbered T5 and T7) bombed a submarine off the Tunisian coast, with unknown results. Subsequent attacks achieved similarly uncertain results, but during 1917 the machines operating out of Algerian bases found many anti-shipping mines which were then rendered harmless by mine-sweepers. Otherwise the French naval air crews' attempts to enter combat tended to be frustrating. On 9 October 1917, for example, a flying boat from Bone saw an enemy submarine on the surface, actually in the process of shelling a small ship, but it dived before the Frenchmen in their slow flying boat could get close enough to attack. The following day the same flying boat dropped bombs on what appeared to be a submarine just below the surface. Again the results were unknown, but a British convoy did change course as a result. Sometimes a flying boat got close enough to shoot at the conning tower of a submarine before it had fully dived, but no claims were made for enemy vessels sunk.



During the summer of 1918 Escadrille G 489 was briefly based at al-Jadidah, then known by its old Portuguese name of Mazagan. Its Voisin LBP VIII reconnaissance aircraft, armed with quick-firing 37mm cannon as seen here, plus some older Caudron G.4 aeroplanes, were intended to attack German submarines off Morocco's Atlantic coast. However, only four aeroplanes arrived before the war ended. (Section Air du service historique de la Défence)

A significant success was nevertheless claimed in May 1918. On the 18th of that month, stations at Oran and Arzyu (Arzew) were called upon to protect a convoy sailing between Gibraltar and Bizerte. This convoy, having set sail at midnight, was to pass Oran at 0400 hrs. Flying boats, probably the station's Donnet-Denhaut 150hp, therefore took off from Oran at 0615 in near darkness, poor visibility and frequent squalls. The convoy was seen at 0710 hours, 140kms north-east of Oran. After an exchange of recognition signals the convoy's escort reported nothing suspicious, so the section returned to Oran. On their way home, however, the flying boat crews saw a submarine about 20kms from the convoy. The submarine immediately dived, disappearing from view 30 seconds before the flying boat reached the spot. Nevertheless the French naval airmen dropped their bombs ahead of what remained of the sub's wake at 0735. They then remained in the area for a further 10 minutes before heading for Arzyu. Lacking a radio, the quickest way of warning the convoy was for the naval air station to send a message to the convoy escorts via Oran. The flying boats landed at 0845 and Oran receiving the warning at 0850.

Unfortunately, bad weather and heavy rain prevented another flying boat section taking off from Arzyu until 1010 hrs. The machines were again Donnet-Denhauts. After avoiding a number of squalls, they found the convoy at 1200 noon, but soon had to head back to base. On the way they saw the submarine on the surface, about 22kms from the convoy. This time the enemy was slow to dive, her conning tower and part of the deck still being visible when the French flying boats swept overhead. Bombs were dropped at approximately 1245 hrs. The front of the submarine's hull broke surface, resulting in a huge bubble and what seems to have been oil on the surface of the sea. Now the sub's hull emerged at an angle of more than 60 degrees. About 10 minutes later the submarine had fully surfaced, but seemed to be sinking by the stern. The flying boats now had to return to Arzyu, which they reached at 1400 hrs. Twenty-fine minutes later another section of flying boats from Arzyu again found the submarine on the surface, and attacked it with gunfire and bombs before returned to Arzyu at 1700 hrs. It was later learned that a damaged enemy submarine, the U-39, had sought refuge in the neutral Spanish port of Cartagena where the boat and its crew were interned.

By the end of the war French flying boats operating out of stations along the Tunisian and Algerian coast had made 6,170 flights flying totally 13,575 hours, while 10 of them they had dropped a total of some fifty bombs on real or suspected targets. They had used the following variety of machines:

- Donnet-Denhaut 150hp (Algiers 1917-18, Arzyu (Arzew) 1918, Bizerta 1916-18, Bone 1917-18, Bijayah (Bougie) 1917-18, Qilibiyah (Kelibia) 1916-18, Mustaghanim (Mostaganem) 1917, Oran 1917-18, Sousse 1917-18 and Tinis (Tenes) 1917).
- Donnet-Denhaut 160hp (Algiers 1917-18, Arzyu (Arzew) 1918, Bizerta 1916-18, Bone 1917-18, Oran 1917-18 and Sousse 1917-18).
- Donnet-Denhaut 200hp (Algiers 1917-18, Arzyu (Arzew) 1918, Bani Saf 1918, Bizerta 1918, Bone 1918, Bijayah (Bougie) 1918, Shirshal (Cherchell) 1918, Jijil (Djidjilla) 1918, Qilibiyah (Kelibia) 1918, Oran 1917-18 and Sousse 1917-18).
- FBA 100hp (Bizerta 1916-17 and Qilibiyah (Kelibia)1916-17).
- FBA 150hp (al-Qul (Collo) 1917)
- Georges Levy 280hp (Bizerta 1918)
- Tellier 200hp (Algiers 1917-18, Bizerta 1917-18, Jijil (Djidjilla) 1918 and Sousse 1917-18).
- Tellier 200hp cannon (Algiers 1918, Arzyu (Arzew) 1918, Bizerta 1918, Bone 1918 and Sousse 1918)

As already mentioned, the increased activity of enemy submarines in the Gulf of Qabis (Gabes) and around the island of Jirbah (Jerba) became a matter of serious concern early in 1917. Between June 1917 and May 1918 the situation was particularly bad. The enemy's main targets were, of course, Allied convoys plying between Gibralter, Bizerte, Malta, Thessaloniki and further afield, but they also targeted local fishing vessels and those used by Tunisian sponge divers. While the fishing communities lost many of their boats, the sponging fishing communities also lost valuable diving gear, suits and pumps. On at least one occasion, enemy submarines came close enough to shell the port of Mahdia. The French Navy's coastal defence fleet in this part of Tunisia consisted of a handful of small torpedo and patrol boats and were quite unable to cover the whole coastline. As a result, Tunisian fishermen no longer dared to go to sea, leading to food shortages in a local population which largely lived off fish. Similarly the sailing feluccas of the sponge divers remained on shore and the local tuna canneries stood idle. Nevertheless, from early 1918 the French air units which were supporting the coastal defence fleet began to receive British 45kg bombs which were much more effective against submarines that the aeroplanes' previous missiles.

The wrecked gondola of French airship AT.2 at al-Saniyah (La Sénia), now Ahmed Ben Bellah Airport outside Wahran (Oran) on 15 July 1918. This was one of the older and smaller Astra-Torres dirigibles, and it appears to have been caught in a crosswind while being manoeuvred in or out of its hanger. (Jarrige Archive)

As a result the U-Boats were gradually driven further from the Tunisian coast which not only enabled cargo ships to use the port of Sfax once more, but the fishermen and sponge divers could also return to their traditional waters.

Escadrilles C 543 and C 544 had been available to carry out maritime patrols, but their primary focus remained the Libyan frontier and helping Italian forces in Tripolitania. Although the reduction in resistance activity in Libya allowed these squadrons to pay more attention to the submarine threat, more was obviously needed. A newly created escadrille, C 488, had been intended for this purpose but in December it was sent instead to Patras in Greece where it did, however, undertake the coastal patrols for which it had been trained. Meanwhile the French authorities decided that Escadrilles C 543 and C 544 were sufficient to support the flying boats based at Bizerte, Sousse and Qilibiyah (Kelibia).

Escadrilles F 541 and F 542 had the oldest aeroplanes in this theatre and were consequently re-equipped with Voisins powered by the version of Renault engines that had been developed for "colonial" service. Both of these units were ready with 14 machines by September 1918. The increased number of flying boats based at Sousse (16 during the early months of 1918) also meant that the aerodrome at Mahdia was no longer needed, so its resident squadron, C 544, was sent back to Qabis (Gabes) in the south where its old Caudrons were to be replaced with Voisins before being redeployed to nearby Madnin (Medenine). Last of all, Escadrille C 543 at Sfax was also to go to Qabis for new aeroplanes, while C 490 would replace it at Sfax. Another Escadrille, C 490, was created at Lyon in April 1918 but there were delays in sending it to Sfax. Once there, C 490 was placed under the authority of the nearby Naval Command Centre and its Caudron G.4s (probably ex-C 543 or C 544 machines) began operations on 20 August. Thereafter they escorted ships and patrolled the Tunisian coast in cooperation with French Navy flying boats based in Bizerta and Sousse. Then came the somewhat unexpected armistice of November 1918, and French plans for aviation in Tunisia were put on hold – though only for a while.

The threat posed by enemy submarines along the Atlantic coasts of the French colonial empire in Africa were almost as dangerous as those in the Mediterranean. Four months after the flying boat carrier *Dorade* had delivered three French Navy 130hp FBAs to Casablanca in March 1917, a relatively junior French naval officer, Enseigne de Vaisseau First Class Pissin was sent to Morocco to study the possibility of establishing a naval flying base on the Atlantic coast. Casablanca was the obvious choice for such a Centre d'Aviation Maritime because it already had good facilities. Authorization for such a Centre was given on 1 September 1917, and the unit would initially have eight flying boats under Pissin's command. The first 150hp Donnet-Denhauts arrived in October but while they were being made operational, the newly established unit used its two remaining operational FBA 130hp machines. Casablanca's Centre d'Aviation Maritime reached operational status on the final day of 1917, and by March 1918 it had 16 machines, a dozen of which were armed, and had also just received its first modern Donnet-Denhaut 200hp. Its primary role was, of course, to escort convoys along the Moroccan coast and it would continue to do this for a further year after the First World War had ended.

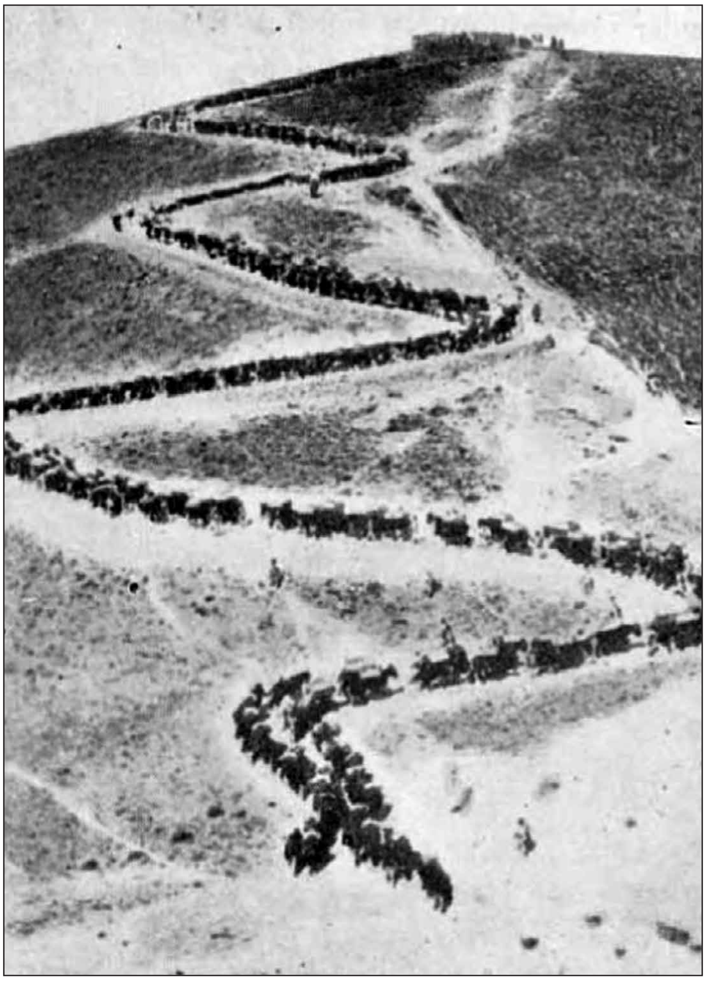
In December 1917 Escadrille F 552 was redeployed from the Atlantic coast to southern Morocco because of the uprising there. To replace it, the French government urgently authorized the creation of a new squadron, C 489, to support the Navy. However, it would remain dependent upon the Aircraft Park at Casablanca. This new unit would be based at al-Jadida (then still known by its Portugese name of Mazagan), just over 100 kilometres down the coast from Casablana, under the command of Capitaine Condamy. Although personnel were chosen quickly in January 1918, delays in the arrival of the new unit's aircraft meant that it could not start work until 5 August 1918. In fact C 489 actually flew both Caudron G.4 and Voisin 8 Ca2 LBP aeroplanes whose 37mm Hotchkiss quick-firing cannon could penetrate the hull or conning tower of a submarine if it was caught on the surface. However, continuing delays in the delivery of its machines meant that even in October 1918, C 489 still only had four serviceable aeroplanes. The armistice of November 1918 then removed the need for such maritime patrols and so C 489 was disbanded a few weeks later.

As if the problems in North Africa were not enough, the French faced further difficulties deeper into the Sahara Desert, compounded by plagues of locusts and a drought which led to famine in southern Algeria and neighbouring southern Tripolitania and Libya during 1916. Nevertheless, the French colonial authorities still believed that aeroplanes might hold the key to controlling such vast and inaccessible regions. With this in mind, General François-Henry Laperrine sent a flying unit to southern Algeria during the summer of 1917; his plan being to put increasing pressure on dissidents in the Hoggar Mountains. He also intended to eventually establish a military aviation centre at Timbuktu on the other side of the Sahara in what is now Mali. From such centres French aeroplanes were expected to keep watch on the frontiers, search for "rebel harkas" or war-bands, and to support the dispersed colonial forces following the failed French Saharan offensives.

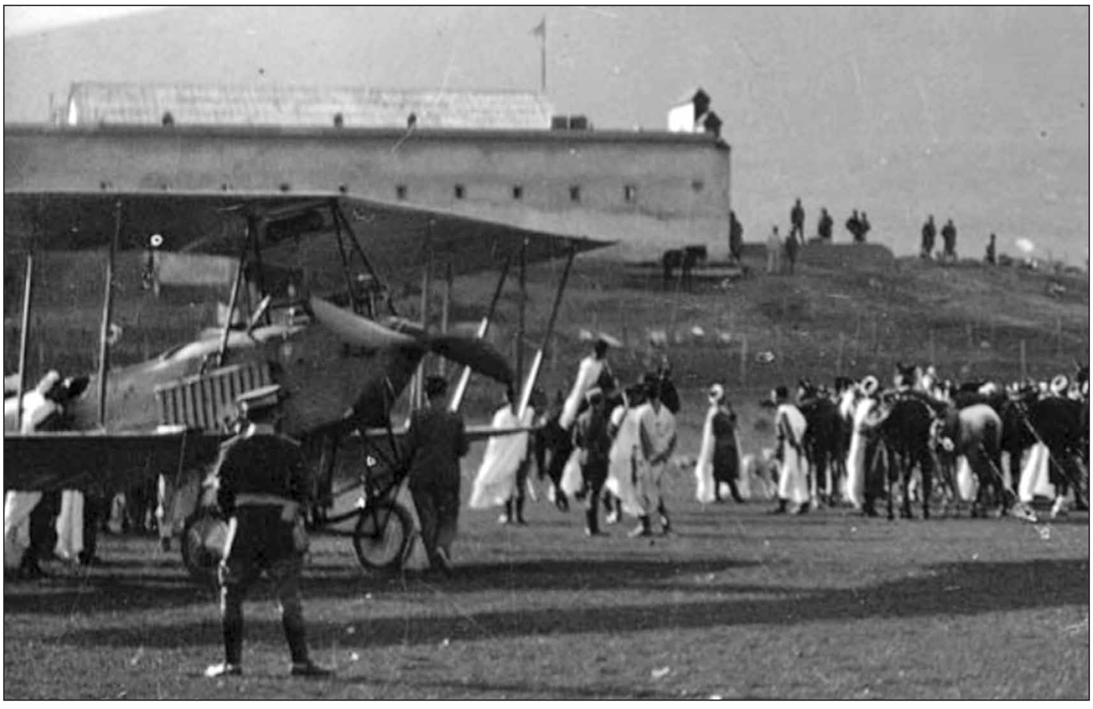
Before such a strategy could become a real option, however, a reliable air link between the northern and southern fringes of the great desert had to be established. This was a very ambitious objective during the last two years of the Great War. As Governor General of French West Africa, Joost Van Vollenhoven, a Dutch soldier in French service, was asked to study the possibility of setting up an air postal service between Algiers and Dakar. His conclusions were sent to Paris on 7 August 1917, but the plan would later be dropped in October 1918 by Van Vollenhoven's successor, on grounds of cost. Van Vollenhoven was not alone in believing that air power could be the fastest and most practical way of pacifying the enormous French colonial territories of Sahara and Sudan – here the name Sudan referred to the sahel or semi desert regions south of the Sahara rather than what is now the Republic of Sudan.

Such men urged the French government to send a second squadron to the deep desert and in October 1917 the French Colonial Office finally agreed that, despite the desperate demands of the Western Front, a plan should be drawn up for an "air service" for French West Africa. One of the first requirements was a clearly marked route across the desert, with highly visible marks set up from five to 10 km apart which pilots could follow visually. Aerodromes were also needed at Bouressa, Timbuktu and Gao. These plans were, in fact, an updated version of the ambitious dreams of the pre-war years. It would take many months before much was actually done on the ground, though on 20 October 1918 a squadron, numbered 591 and with an intended strength of fourteen aeroplanes, formally came into existence. The First World War came to an end three weeks later and it would not be until 1920 that French West Africa actually acquired an air service of its own.

At the time of the armistice in November 1918, the French Army's Service Aéronautique had twenty units based in the overseas colonies, something over five percent of its total strength. In North Africa and Sahara these had played a small but significant role while also paving the way for the post-war development of "colonial aviation". Meanwhile, however, the so-called "Revolt of 1917" by indigenous peoples continued to rumble on in the deep desert and would only be brought to an end in 1919 by the use of tactics which some observers have described as almost genocidal.



Aerial photograph of a Spanish military convoy climbing a steep path inland from Mellilla in 1914, taken from an aeroplane based at the Spanish forward aerodrome at Zilwan (Zeluán). This is now outside the frontier of the Spanish enclave of Mellilla. (V.G. Dolz archive)



The Austrian manufactured Lohner B.1 Pfeilflieger biplanes which the Spanish government purchased some years before the outbreak of the First World War remained in service in the Spanish Protectorate in northern Morocco and in Spain itself, long after they were considered obsolete by the Austro-Hungarian Empire where they had been manufactured. The machine seen here was probably photographed outside Titwan. Neutral Spain had little choice but to keep such aeroplanes flying because the Spanish government could no longer purchase machines from the belligerent powers. (J. Sánchez Mendez archive)

5

SPANISH MOROCCO DURING THE GREAT WAR

Spain was, of course, neutral during the First World War, unlike its neighbour Portugal which entered the conflict as an ally of the United Kingdom. Nevertheless, the Spaniards had a North African war of their own which had flared up before 1914 and which would carry on for many years after 1918. Some of Spain's opponents in its Protectorate in northern Morocco were either from the same groups that were opposing the French in their Protectorate, or were close to them culturally, historically or politically.

On a more immediate and practical level, the outbreak of the Great War very soon became a major hindrance to Spanish air operations, even in Spain itself and most definitely in the Moroccan Protectorate. It became impossible to import new aeroplanes after Lieutenant Ortiz Echagüe took charge of three Morane-Saunier Type Gs in 1913. These had been purchased for the Spanish Army by the Count of Artal in 1913, a wealthy man who, having been the President of the Spanish Chamber of Commerce in Buenos Aires, was ennobled by King Alfonso XIII the previous year. These machines proved to be lighter than Spain's existing Nieuports and were very popular, two seeing service at Titwan (Tetuan) in Morocco while the third was used as a training machine at Getafe. In fact one remained in service until 1919.

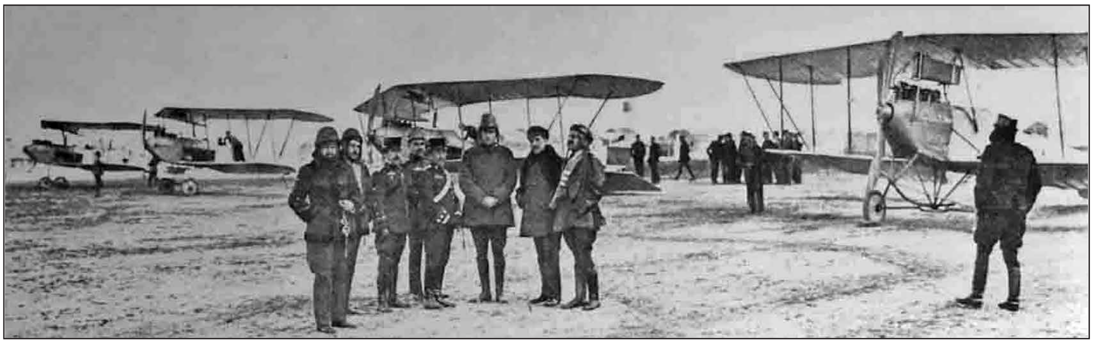
A Spanish Morane-Saulnier Type GA coming in to land in northern Morocco. This was one of the three Morane-Sauniers purchased for the Spanish Army by the wealthy Count of Artal in 1913, two of which saw long service at Titwan (Tetuan) in northern Morocco while the third was used as a training machine at Getafe in Spain. One Morane-Saulnier Type GA would, in fact, remain in Spanish military service until 1919. (J. Sánchez Mendez archive)

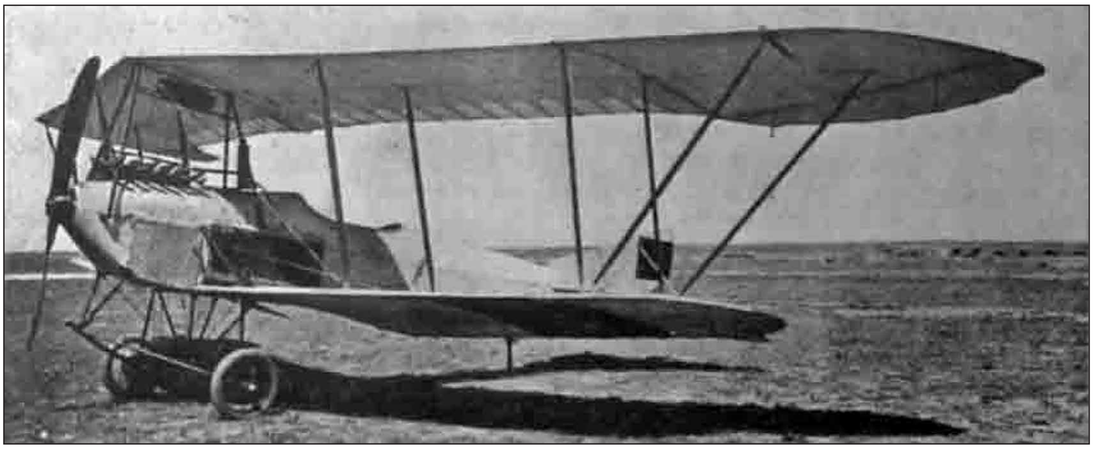
Replacing the propeller of a Lohner B.1 Pfeilflieger in Morocco. The tall officer is said to be Alfonso Prince of Asturias, the Infante de Orleans, son of King Alfonso XIII and heir to the Spanish throne. (J. Sánchez Mendez archive)

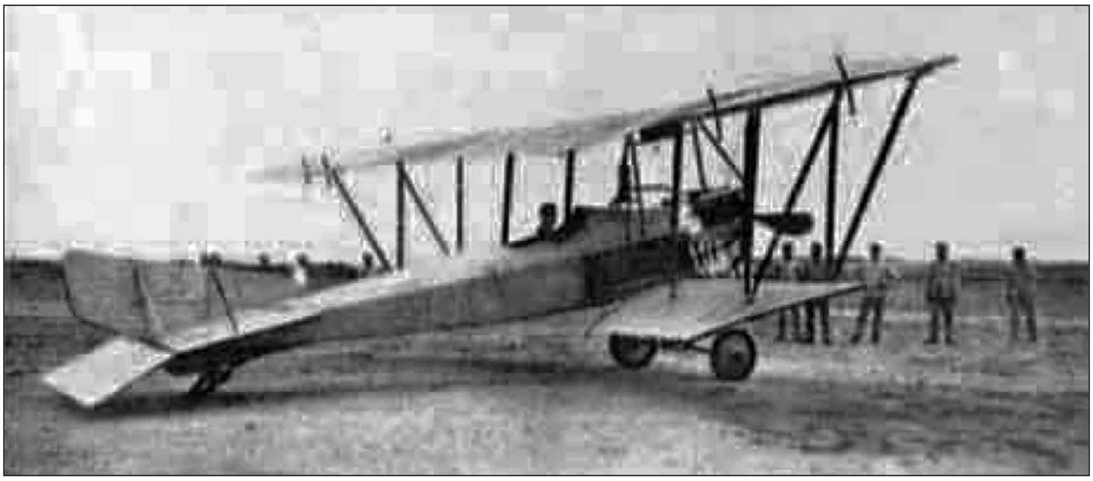
Pilot Perez Nunez and his observer, Luis Gonzalo, in their Nieuport IV monoplane at Zilwan (Zeluán) aerodrome outside Melilla. The obsolescent Spanish Nieuports remained operation at Zilwan until around 1917. (V.G. Dolz archive)

In fact the Spanish tried to minimise military operations in Morocco in case they compromised Spanish neutrality, though this was not supposed to include flying. The units based at the three aerodromes in the Spanish Protectorate remained active, mostly in reconnaissance but also carrying out sporadic bombing sorties. For example, during August 1914, bombing by the squadron at Zeluán reportedly caused many Moroccan casualties at Souk al-Arbara, Beni Bu-Jadri and other locations. Colonel Pedro Vives, the director of Spain's Aeronáutica Militar, arrived in Zeluán on 13 August and stayed for nine days, taking part in several flights as an observer. After he left, the squadron continued making reconnaissance flights until 17 September. A lack of spare propellers then reduced Spanish air activity. In fact, the country's inability to obtain spare parts for its aeroplanes from the European belligerent powers had already become a serious problem.

On 28 October, Captain Alonso – the commanding officer at Zeluán aerodrome – received orders to suspend all flying until further notice. This pause lasted until 13 December when the Zeluán squadron was ordered into the air again. The following day they began a bombing campaign which lasted until 19 December 1914. General José Maria Vega, the military governor of Melilla since 1905, also flew with Lieutenant Olivié to observe the scene of operations. Elsewhere the months of November and December 1914 saw a few reconnaissance and bombing flights in the Bek Karria and Beni Lora areas.

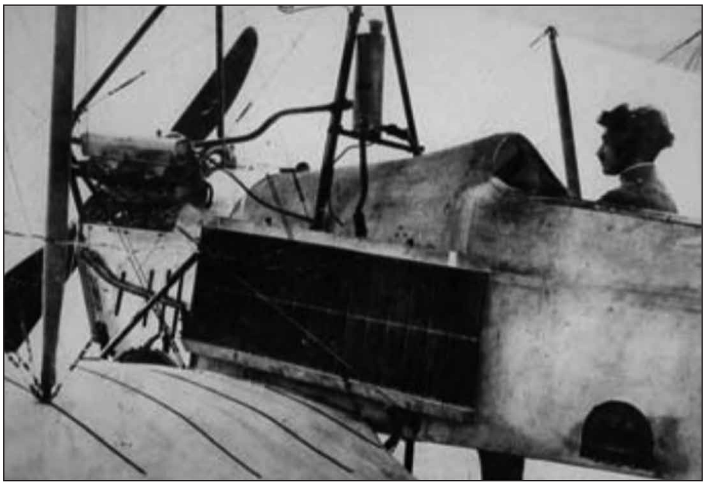

A line-up of Spanish Lohner B.1 Pfeilfliegers, probably in Spain. The aeroplane on the right appears to have a radiator mounted beneath the upper wing, perhaps as part of Eduardo Barrón's experiments while developing his Barrón Flecha as a replacement for the Spanish air arm's aging Lohners. The machine in the centre has a dark rectangle on its rudder, either red or the red-yellow-red stripes which identified many Spanish military aeroplanes around this time. (Museo de Aeronáutica y Astronáutica, Madrid)


The Barrón Flecha was designed to have a Hispano Suiza 140 CV2 engine which was to be manufactured in Spain, but the first example was nevertheless powered by an Austro-Daimler 90hp, as used in the Lohner B.1 Pfeilflieger. This was because no Hispano Suiza was yet available. It again has a red, or red-yellow-red, rectangle on its rudder. (Museo de Aeronáutica y Astronáutica, Madrid)

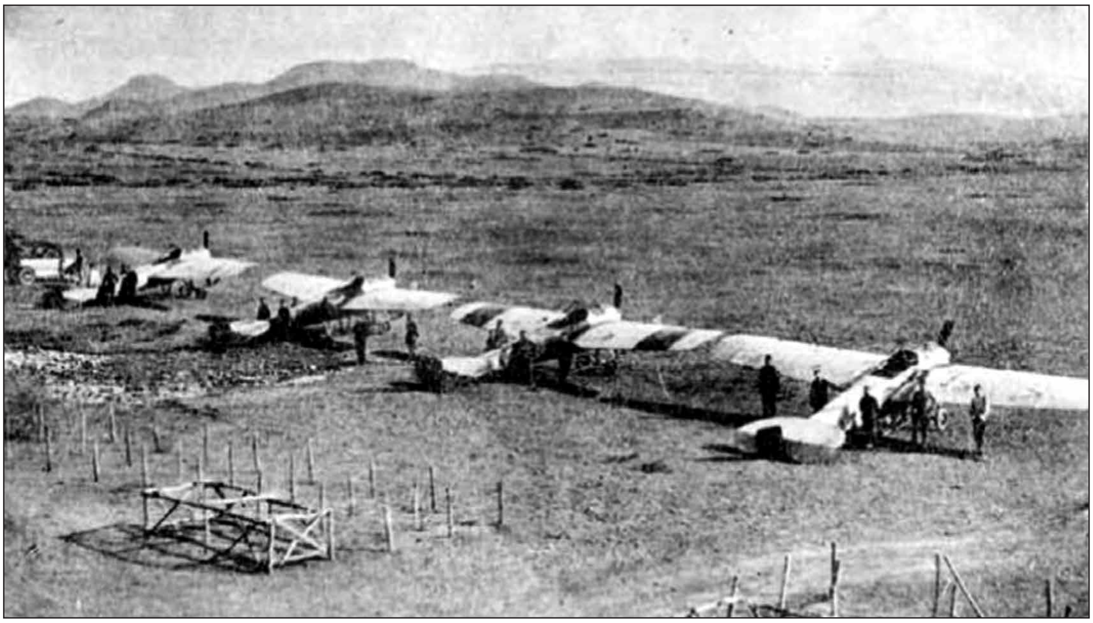

One of the first Spanish built Barrón Flecha biplanes, modified versions of the Austro-Hungarian Lohner B.1, but with a Hispano Suiza 140 CV2 engine. (Museo de Aeronáutica y Astronáutica, Madrid)

By January 1915 the upgraded aerodrome at Zeluán at last had canvas shelters for men and machines. It was now under the command of José Fernandez Valencia Herrera who had earlier served in the Spanish balloon unit at Melilla in 1909, and again served in Morocco during the crisis of 1911. Before training as a pilot on monoplanes he had studied in the Nieuport workshop at Pau in southern France early in 1912, under Dr. Gabriel Espanet, a medical man and pilot as well as head of that establishment. Valencia Herrera then qualified as a Nieuport pilot and became a committed monoplanista or advocate of monoplanes, recalling his displeasure at ever having to fly a Henri Farman biplane. Next he went to the Spanish Flying School at Cuatro Vientos where he qualified as a military observer in October 1913. In February 1914 Valencia Herrera joined the squadron at Titwan (Tetouan) before being sent to the new aerodrome at Zeluán in May, serving in both places as a Nieuport observer. In the month that the Great War broke out, August 1914, Valencia Herrera received his wings as a fully qualified military pilot. At the end of the year he was allocated to the Arcila aerodrome as a reconnaissance pilot, before being chosen as commander of Zeluán in January. Here the airmen soon realised that they had been given a skilled and experienced leader.

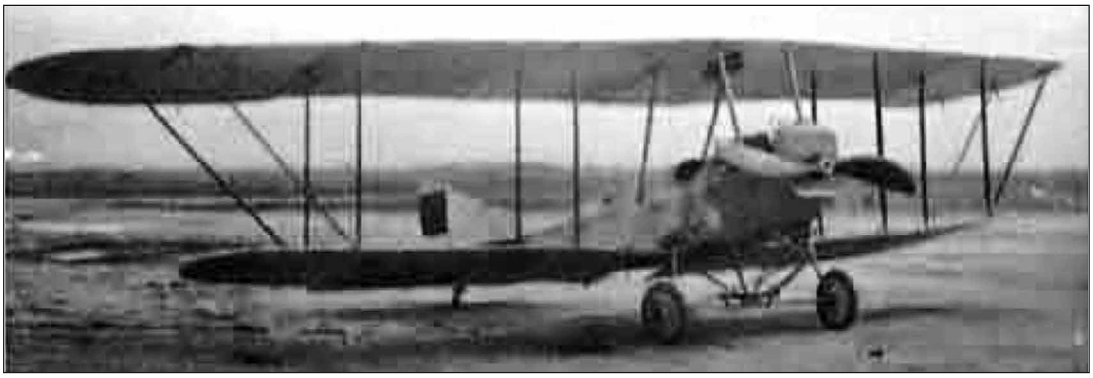
In March 1915, the flying unit at Zeluán was rejoined by Doctor Don Antonio Pérez Nunez who left his role as a flying instructor at Cuatro Vientos. He would soon take part in a major operation against insurgents on 16 March. This month also saw the unit's commanding officer, Captain Valencia Herrera, receive his first Cross of Military Merit "with red symbol" for his services during the Moroccan operations. However, in April he returned to Cuatro Vientos where he suffered slight injuries in a forced landing. Returning to Zeluán, in May, Valencia Herrera escaped without injury from another forced landing on Monte Arruit. Operations against Moroccan insurgents by the Zeluán squadron continued, with sorties on 27 June, and 3, 5, 17 and 28 July. Thereafter there appears to have been a period of quiet. Valencia Herrera was promoted in October but then again returned to Spain in November 1915.



Eduardo Barrón in the cockpit of one of his Barrón Flecha modified versions of the Lohner B.1 Pfeilflieger, clearly showing the Hispano Suiza 140 CV2 engine. (Museo de Aeronáutica y Astronáutica, Madrid)



A line-up of Spanish Nieuport IV G monoplanes at Zilwan. All have dark red or perhaps red-yellow-red rudders while the machine in the centre of the photograph also has a red or red-yellow-red rectangle on its wings. (V.G. Dolz archive)



A Barrón Type W photographed in 1915, showing the frontal radiator, a different centre-section arrangement and separate cockpits. The swept back leading edges of the lower wings, between the fuselage and the first set of inter-plane struts are also visible, and it was this feature which gave the machine its name as the Type W. (J. Sánchez Mendez archive)

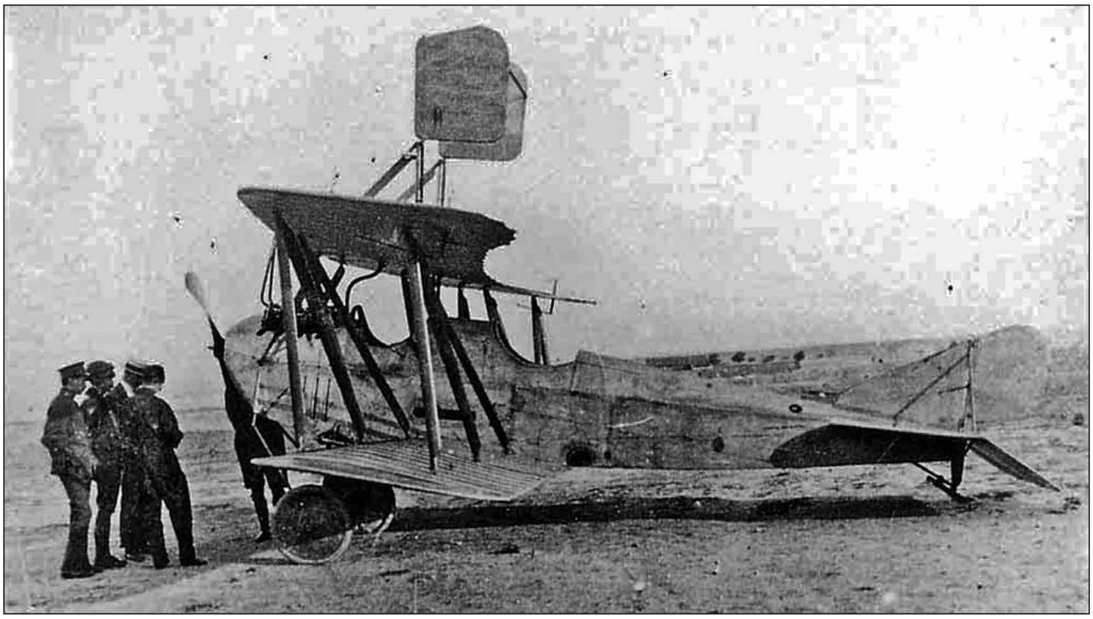
The virtual impossibility of obtaining new aeroplanes from the foreign sources upon which Spain had relied before the Great War, naturally encouraged the idea of manufacturing such machines in Spain itself. Here there was, therefore, considerable interest in the work of Eduardo Barrón. In 1915 he produced a version of the Austrian Lohner B.1 Pfeilflieger, or "Arrow-flier", known as the Barrón Flecha, or "Arrow". This machine looked very similar to the Lohner B.1 aeroplanes which Spain had purchased and used operationally in northern Morocco, but incorporated several of Barrón's improvements. The Flecha had also been designed specifically to be powered by the Hispano Suiza 140 CV2 engine which was manufactured in Spain. Other improvements added by Barrón to the original Austrian design involved the undercarriage. The new aeroplane was first flown by Eduardo Barrón himself on 3 April 1915 and a little under four months later he made a demonstration flight in front of King Alfonso XIII.

Eduardo Barrón produced a further variant which came to be known as the type W because the shape of its lower wings was altered to improve visibility from the observer's cockpit. The prototype Barrón W was completed in September 1915 but had to be fitted with a Curtiss OX 90hp because no Hispano-Suiza engine was available, the first flight being on 3 October. The first flight by a Hispano-Suiza powered Barrón W was in December 1916. A series of 12 Barrón W biplanes would be manufactured, the first six being handed over in Madrid during 1917 and later serving in North Africa. Altogether, 16 aeroplanes were eventually built in Barrón's workshops at Cuatro Vientos for the Servicio de Aeronáutica Militar. These remained use until 1919, alongside a number of archaic Maurice Farmans stationed at Arcila at the westernmost end of the Spanish Protectorate, overlooking the Atlantic Ocean.

Between 1915 and 1918 the Moroccan insurgent or resistance leader Ahmad al-Raisuni took advantage of the uneasy peace between himself and Spanish troops to undermine Spanish influence in the western part of the Spanish Protectorate. Meanwhile, German agents were urging al-Raisuni to refocus his efforts against the French Protectorate. This might have been a positive move as far as the Spanish government was concerned, as it preferred a policy of minimal military action while at the same time preserving stability within the Spanish Protectorate.

The year 1916 was, in fact, a relatively quiet one for the Servicio de Aeronáutica Militar in Morocco with only two recorded attacks on enemy encampments. Nevertheless, the air war elsewhere in Europe was being watched attentively. Meanwhile in Spain during 1916, Engineer Captain Kindelán was already working on theories of air power which foreshadowed those of Gulio Douhet, William Mitchell and Hugh Trenchard. Referring specifically to Spain and the situation in northern Morocco, he wrote that; "In Africa, if our forces need be provisioned, rearmed or repatriated, it can be done by air, and studies show that this problem can be solved."

The following year, 1917, was again relatively quiet in the Spanish Protectorate. Temporary command of the squadron at Zeluán passed to Captain José Espinosa Arias, but on 10 June he handed over to Captain Francisco Bustamante. It was around this time that Zeluán's Nieuport monoplanes were replaced by new, Spanish-built Barrón Flecha biplanes, the old machines being sent back to Cuatro Vientos to be used for training purposes. The same went for the old Lohner biplanes elsewhere in the Protectorate. Meanwhile, a major effort was put into expanding the Aeronáutica Militar as a whole, though with a focus on training back in Spain. In the Moroccan Protectorate the numbers of aeroplanes remained small and there was no denying the vulnerability of the Spanish military position. Also in 1917, the highly successful Hispano-Suiza aero-engine and automobile company established its own factory in Guadalajara in central Spain. There it was to build Barrón aeroplanes, but nothing was produced until 1919.



Eduardo Barrón's other wartime designs were less successful than the Flecha and Type W, though he and his team continued to try and provide Spain with the modern aeroplanes the country could not purchase elsewhere due to the ongoing Great War. This is the Barrón Delta prototype, probably photographed on 1 October 1916. It was probably the machine nicknamed "The Rabbit" because of the additional stabilizers or "lateral control ears" above its wings. It did not go into production. (Museo de Aeronáutica y Astronáutica, Madrid)

The Barrón España was a "Spad S.VII lookalike" built in 1917, after Eduardo Barrón and three other Spanish experts had visited the Société Pour L'Aviation et ses Dérivés (SPAD) factory in France. They had returned home with technical documentation but not a complete set of plans for the famous French fighter. (Museo de Aeronáutica y Astronáutica, Madrid)

The final year of the Great War saw neutral Spain not only suffering from an inability to purchase equipment from the belligerent powers, but also seeing the mediocre performance of its existing aeroplanes rapidly outstripped by those being manufactured in huge numbers elsewhere. Under such circumstances it is a remarkable testimony to the Servicio de Aeronáutica Militar that Captain Joaquin Fanjul and the photographer Alonso reached an altitude of 4,750 metres in a Barrón machine in 1918, helped by their use of a rudimentary form of liquid oxygen equipment. This machine was then sent to Morocco but proved so unreliable that it only stayed for three months.

At the end of the Great War, neutral Spain found itself still facing a courageous enemy who remained determined to oppose any further extension of real Spanish control within the nominal Spanish Protectorate in northern Morocco. As yet Spanish air power, small as it was, may have contained a potentially dangerous situation by bombing souks or open-air markets, villages and concentrations of enemy troops, but little more. The Servicio de Aeronáutica Militar was simply not able to carry out sufficient numbers of offensive raids, nor could it bring a sufficient density or accuracy of fire to bear.

Spain's available aeroplanes had by now been in service for several years and were in a poor state of repair. The same went for their engines, which suffered frequent failures, especially with their magnetos, and consequently forced landings had at times been almost daily occurrences. Nevertheless, the efforts of Spanish airmen, technicians and their commanders had achieved enough to be taken seriously by the senior Army Command. This in turn resulted in the Spanish General Staff presenting their Chief with a report which highlighted the importance of aeroplanes in Spanish Morocco, especially where reconnaissance was concerned. Put simply, during the Great War neutral Spain had learned much the same lessons as had those by men who endured the killing fields of the Western Front and elsewhere.

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